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SPECIAL NOTE

Owing to staffing and other difficulties in the printing, binding, and allied trades, and from other causes, there has been considerable delay in the issue of the *Proceedings*. Consequently it was considered advisable to issue Vols. LXXX and LXXXI concurrently, so that reports, etc. might be brought more up to date.

Costs of production have also risen very greatly, which constitute a heavy burden on the Society's resources. In order to obviate the alternative, that of raising the annual subscription, it has therefore been decided

- (1) to bind these two volumes in one cloth cover;
- (2) to reduce future binding costs by issuing subsequent volumes in paper covers, as was done in relation to the first twelve volumes of the *Proceedings* (1851-78).

The attention of Fellows is also called to the following features:—

- (1) Alterations in Laws 1, 9, and 15 of the Society, and additional matter regarding Use of Library, Rules for Contributors, and Forms of Bequest.
- (2) Limitation to two lines, where possible, of names, designations, and addresses of Fellows. (This for reasons of economy.)
- (3) On last page of volume is a List of Books available for purchase at the Society's rooms.

PROCEEDINGS

OF THE

Society of Antiquaries of Scotland

SESSION

MCMXLV.-MCMXLVI.

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VOL. LXXX.

SEVENTH SERIES.—VOL. VIII.

NATIONAL MUSEUM OF ANTIQUITIES OF SCOTLAND,
QUEEN STREET, EDINBURGH.

PRINTED FOR THE SOCIETY BY NEILL AND COMPANY, LTD.

MCMXLVIII.

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TABLE OF CONTENTS

	PAGE
Anniversary Meeting, 1945,	1
Annual Report for 1944-1945,	2
A Bronze Worker's Anvil and other Tools recently acquired by the Inverness Museum, with a Note on another Scottish Anvil. By Professor V. GORDON CHILDE,	8
The Excavation of the "Wag" or Prehistoric Cattle-fold at Forse, Calthness, and the Relation of "Wags" to Brochs, and Implications arising therefrom. By ALEXANDER O. CURLE, C.V.O., LL.D., F.S.A., F.S.A.Scot.,	11
A Miscellany of Antiquities in Easter Ross and Sutherland. By J. M. DAVIDSON, O.B.E., F.S.A., F.S.A.Scot.,	25
The Abbot's Cross. By WILLIAM FENTON, F.S.A.Scot.,	34
Notes on Some Northumbrian "Peles." By A. GRAHAM, M.A., F.S.A., F.S.A.Scot.,	37
Notes on Scottish Incised Slabs (II). By F. A. GREENHILL, M.A.(Oxon.), F.S.A.Scot.,	43
With Note on the Cross Kirk at Peebles. By JAMES S. RICHARDSON, F.S.A.Scot.,	61
Excavations at Chester Hill Fort, Hundleshope, in Manor Parish, 1939. By Miss P. A. M. KEEP, F.S.A.Scot.,	66
The Inauguration of Alexander III. By Miss M. D. LEGGE,	73
Field Work in Colonsay and Islay, 1944-45. By Professor STUART PIGGOTT, B.Litt., F.S.A., F.S.A.Scot., and Mrs C. M. PIGGOTT, F.S.A., F.S.A.Scot.,	83
A New Roman Mountain-Road in Dumfriesshire and Roxburghshire. By IAN A. RICHMOND, M.A., LL.D., F.B.A., F.P.S.A., F.S.A.Scot.,	103
The Tolquhon Aisle, and other Monuments in Tarves Kirkyard; with some further Notes on Tolquhon. By W. DOUGLAS SIMPSON, M.A., D.Litt., F.S.A., F.S.A.Scot.,	117
Jacobite Rings. By ROBERT B. K. STEVENSON, M.A., F.S.A.Scot., <i>Keeper of the Museum</i> ,	127
Further Observations on Hut-Circles. By WALLACE THORNEYCROFT, F.S.A.Scot.,	131
A Shell-Heap at Polmonthill, Falkirk. By ROBERT B. K. STEVENSON, M.A., F.S.A.Scot., <i>Keeper of the Museum</i> ,	135
Notes:—	
1. An Example of Scottish Medieval Pottery found in Paisley, 19th December 1938. By W. P. MAYES, F.S.A.Scot., Curator of Paisley Museum,	140
2. A Small Hoard of Polished Stone Knives and a Polished Stone Adze from the Ward of Shurton, near Lerwick. By PETER MOAR, <i>Corresponding Member</i> ,	140
3. Jottings on Early Pottery. By R. B. K. STEVENSON, M.A., F.S.A.Scot., <i>Keeper of the Museum</i> ,	141
4. "Earth-House" at Naversdale, Orphir. By HUGH MARWICK, O.B.E., M.A., D.Litt., F.S.A.Scot.,	143
5. Old Windmill at Whithorn, Wigtownshire. By F. A. GREENHILL, M.A.(Oxon.), F.S.A.Scot.,	144
6. An Old Cooling-Trough in Fife. By NORMAN M. JOHNSON, B.Sc., F.R.S.E., F.S.A.Scot.,	144
7. An Encrusted-Urn Burial at Scotlandwell, Kinross-shire. By R. B. K. STEVENSON, M.A., F.S.A.Scot., <i>Keeper of the Museum</i> ,	145

TABLE OF CONTENTS

	PAGE
8. Flint Core Axe found on Fair Isle, Shetland. By GEORGE A. CUMMING,	140
9. Iron Age Pottery from Sundayswells Hill, Torphins, Aberdeenshire. By W. DOUGLAS SIMPSON, M.A., D.Litt., F.S.A., F.S.A.Sect.,	148
Donations to and Purchases for the Museum, 1945-1946,	151
Donations to and Purchases for the Library, 1945-1946,	157
Anniversary Meeting, 1946,	159
Annual Report for 1945-1946,	160
Meetings of the Society,	164
Index,	165

LIST OF ILLUSTRATIONS

	PAGE		PAGE
Bronzes from Inshoch Wood, Inverness-shire.		Northumbrian "Peles": Black Middens	
Pl. I, 1, <i>facing page</i>	8	Pele, Shipley Shiels. Pl. XII, 4.	
Cast of mould from Low Glengyre, Wigtown.		Tomb-slab of Gilbert Grenlau, Esq., Kinkell,	
Pl. I, 2, <i>facing page</i>	12	Aberdeenshire, and (reverse) John Forbes	
"Wag" at Forae, Caithness: View across.		of Ardmurdo,	17
Pl. II, 1, <i>facing page</i>		Sculptured slab at Shrine of St Nicholas,	
— View of interior, Pl. II, 2.		Cross Kirk, Peebles. Pl. XIII, <i>facing page</i>	50
— Interior of dwelling, showing		Cross Kirk, Peebles: Plan, as originally built,	63
hearth. Pl. III, 1.		— Elevation and Plan (including	
— Interior of granary. Pl. III, 2.		feretory),	65
— Doorway into north "wag."		Chester Hill Fort, Huddleshope, near	
Pl. IV, 1.		Peebles: Plan, <i>facing page</i>	67
— Interior of doorway. Pl. IV, 2.		— Enlarged plan of gate area,	67
— Doorway, with position of stair.		— Gate area. Pl. XIV, 1, 2,	
Pl. V.		— <i>facing page</i>	68
— Blocked opening. Pl. VI, 1.		— Post-holes. Pl. XIV, 3-5.	
— Foundation of turf wall. Pl.		— Sections of ramparts, <i>facing page</i>	69
VI, 2.		Duns, etc., in Colonsay and Oronsay: Uaigh	
— Dog-kennel. Pl. VII, 1.		an Fhonnhair. Pl. XV, 1, . . . and page	84
— Ditch at base of hill. Pl. VII, 2.		— Map of Dun sites,	86
— Paved area. Pl. VIII, 1.		— Dun Cragailg. Pl. XV, 2,	
— Two kinds of walling. Pl. VIII, 2.		— and page	88
— Cooking-pot found on hearth.		— Dun Eibhinn,	89
Pl. IX, 1.		— Dun Ghallain. Pl. XVI, 1.	
— Section of wall. Pl. IX, 2.		— Dun Cholla. Pls. XVI, 2, XVII,	
— Plan of "wag,"	13	— and page	91
Grave slab at Ballone, Easter Ross,	29	— Dunan an Nigbean. Pls. XVIII,	
Stone hatchet from Balvraid, arrow-heads		XIX, and pages 94, 95	
from Golspie Links, and brooch and		Duns, etc., in Islay: Gallery grave near Port	
arrow-heads from Cuthill Links, Dornoch,	31	Charlotte, Islay,	99
Tumulus at Cadbollmount, Easter Ross.		— Stones near Dun Chroisprig,	100
Pl. X, 1, <i>facing page</i>	32	— Cairn below Cnoc a' Chuirn,	100
The Abbot's Cross, Lintathen, Angus.		— Dun Chroisprig,	101
Pl. X, 2.		Roman Mountain-Road, Dumfriesshire and	
— Plan and Section,	34	Roxburghshire:	
Northumbrian "Peles": Gatehouse, North		Map 1. Site of Raeburnfoot,	104
Pele. Pl. XI, 1, <i>facing page</i>	38	2. Road at Mid Raeburn,	107
— Hole Tower (from S., E., and		3. Road on Humphrey Law and	
N.E.). Pl. XI, 2, 3, 5.		Lamblair Knowe,	109
— Branshaw Pele. Pl. XI, 4.		4. Road at Craik Cross and Laird's	
— Shittlebough Pele, Pl. XI, 6.		Knowe,	112
— Woodhouse Pele, Pl. XII, 1.		— Section at Craik Moor,	111
— Raw Pele, Pl. XII, 2.		Tolquhon Monument in Tarves Kirkyard.	
— West Woodburn Pele. Pl. XII,		Pl. XX, 1, <i>facing page</i>	120
3, 5.		Heraldic stone in "Auld Tour," Tolquhon	
— Cottage fireplace at Spittal, Rox-		Castle. Pl. XX, 2.	
burghshire. Pl. XII, 4.			

L A W S

OF THE

SOCIETY OF ANTIQUARIES OF SCOTLAND.

INSTITUTED NOVEMBER 1780 AND INCORPORATED BY
ROYAL CHARTER 6TH MAY 1783.

(Revised and adopted December 1, 1947.)

1. The purpose of this Society shall be the study of the ANTIQUITIES AND HISTORY OF SCOTLAND, more especially by means of Archæological Research.

2. The Society shall consist of Fellows, Honorary Fellows, Corresponding Members, and Lady Associates.

3. Candidates for admission as Fellows must sign the Form of Application prescribed by the Council, and must be proposed by a Fellow and seconded by two members of the Council. Admission shall be by ballot.

4. The Secretaries shall cause the names of the Candidates and of their Proposers to be inserted in the billet calling the Meeting at which they are to be balloted for. The Ballot may be taken for all the Candidates named in the billet at once; but if three or more black balls appear, the Chairman of the Meeting shall cause the Candidates to be balloted for singly. Any Candidate receiving less than two-thirds of the votes given shall not be admitted.

5. Honorary Fellows shall consist of persons eminent in Archæology, who must be recommended by the Council, and balloted for in the same way as Fellows; they shall not be liable for any fees of admission or annual subscriptions. The number of Honorary Fellows shall not exceed twenty-five.

6. Corresponding Members must be recommended by the Council and balloted for in the same way as Fellows, and they shall not be liable for any fees of admission or annual subscriptions.

7. Ladies who have done valuable work in the field of Archæology may be admitted as Lady Associates. The number of Lady Associates shall not exceed twenty-five. They shall be proposed by the Council and balloted for in the same way as Fellows, and shall not be liable for any fees of admission or annual subscriptions.

8. Before the name of any person is added to the List of Fellows, such person shall pay to the funds of the Society Two Guineas as an entrance fee and One Guinea for the current year's subscription, or may compound for the entrance fee and all annual subscriptions by the payment of Twenty Guineas at the time of admission. Fellows may compound for future annual subscriptions by a single payment of Fifteen Guineas after having paid five annual subscriptions; or of Ten Guineas after having paid ten annual subscriptions.

9. The subscription of One Guinea shall become due on the 30th September in each year for the year then commencing; and if any Fellow who has not compounded shall fail to pay the subscription for three successive years, due application having been made for payment, the Treasurer shall report the same to the Council, by whose authority the name of the defaulter may be erased from the List of Fellows. Fellows whose membership has lapsed, and who wish to rejoin the Society, may do so either (1) by payment of all arrears of subscription—in which case they shall receive the relative volumes of *Proceedings* if available—or (2) on payment of the subscription for the current year and an entrance fee of two guineas.

10. Every Fellow not being in arrears of the annual subscription shall be entitled to receive the printed *Proceedings* of the Society from the date of election.

11. None but Fellows shall vote or hold any office in the Society.

12. Subject to the Laws and to the control of the Society in General Meetings, the affairs of the Society shall be managed by a Council elected and appointed as hereinafter set forth. Five Members of the Council shall be a quorum.

13. The Office-Bearers of the Society shall consist of a President, three Vice-Presidents, two Secretaries for general purposes, two Secretaries for Foreign Correspondence, a Treasurer, two Curators of the Museum, a Curator of Coins, and a Librarian. The President shall be elected for a period of five years, and the Vice-Presidents for a period of three years. One of the Vice-Presidents shall retire annually by rotation and shall not again be eligible for the same office until after the lapse of one year. All the other Office-bearers shall be elected for one year and shall be eligible for re-election.

14. In accordance with the agreement subsisting between the Society and the Government, the Board of Manufactures (now the Board of Trustees) shall be represented on the Council by two of its Members (being Fellows of the Society) elected annually by the Society. The Treasury shall be represented on the Council by the King's and Lord Treasurer's Remembrancer (being a Fellow of the Society).

15. The Council shall consist of the Office-Bearers, the three representative Members above specified, the Keeper of the Museum, *ex officio*, and nine Fellows elected by the Society.

16. Three of the nine elected Members of Council shall retire annually by rotation, and shall not again be eligible till after the lapse of one year. Vacancies among the elected Members of Council and Office-Bearers occurring by completion of term of office, by retirement on rotation, by resignation, by death or otherwise, shall be filled by election at the Annual General Meeting. The election shall be by Ballot, upon a list issued by the Council for that purpose to the Fellows at least fourteen days before the Meeting.

17. The Council may appoint committees or individuals to take charge of particular departments of the Society's business.

18. The Annual General Meeting of the Society shall take place on St Andrew's Day, the 30th of November, or on the following day if the 30th be a Sunday.

19. The Council shall have power to call Extraordinary General Meetings when they see cause.

20. The Ordinary Meetings of the Society shall be held on the second Monday of each month, from December to May inclusive.

21. Unless special arrangements to the contrary have been made, copyright of the *Proceedings* and of all papers printed therein, as well as of all illustrations, shall belong to the Society. This provision shall not apply to illustrations made from blocks borrowed from outside sources.

22. Every proposal for altering the Laws must be made through the Council; and the Secretaries, on instructions from the Council, shall cause intimation thereof to be made to all the Fellows at least one month before the General Meeting at which it is to be determined on.

LIBRARY REGULATIONS.

1. The Library is open to the public for reference, but the privilege of borrowing books is extended only to Fellows of the Society.

2. No Fellow may have more than five borrowed books in his possession at any one time. Books may not be retained longer than two months, and may be recalled to the Library after a fortnight if required by another reader. If Fellows desire to retain a book for a further period of two months, a written application must be made.

3. The following categories may not be borrowed except on the authority of the Council: MSS. and typescripts; scarce volumes, pamphlets and all works published before 1800; standard works of reference, bibliographies, catalogues and maps; certain standard authoritative works unless duplicate copies are stocked; volumes liable to damage in transit owing to their size, weight or condition. Books, including periodicals, will not normally be lent out within two months of acquisition. Newly acquired works, and some works of reference and standard authorities may, however, be borrowed for one night or from Saturday to Monday morning at the Keeper's discretion.

4. Fellows may borrow by post only within the United Kingdom and upon repayment of postage. Books must not be sent with open ends, and registration will be required.

5. Loss or damage shall be made good by the borrower, who may be required by the Council to furnish another copy of the entire work.

Infringement of the foregoing rules will render the borrower liable to a suspension of borrowing privileges.

RULES FOR CONTRIBUTORS TO THE *PROCEEDINGS*.

1. Each contribution will be considered by the Editorial Committee and a decision intimated to the sender without undue delay.

2. If the contributor wishes the paper to be read before the Society a date will be arranged, and (if lantern slides are required to be made) the requisite photos and drawings should be handed to the Editor at least one month before the date of the meeting.

3. All slides prepared at the Society's expense become the property of the Society and are filed for general use. This does not apply to slides prepared or furnished by the contributor, though gifts of these are welcomed.

4. The time limit assigned to each paper will be intimated to the contributor, and it is desirable that the reading of the paper (or synopsis thereof) should not exceed that period. If a special précis of the paper is desired for insertion in the Press, that should be handed to the Secretary on the day of the meeting.

5. If the paper is to appear in the *Proceedings* it must be typed or clearly written, and submitted to the Editor in as advanced a state as possible for sending to the printers. Untidy papers that are difficult to decipher or need a lot of adjustment and re-editing may be delayed in publication.

6. To avoid adding to the already high printing costs no considerable alterations or additions will normally be allowed after the type has been set up, unless the author undertakes to defray the cost of such alterations. No major changes can be effected after the article is in page form.

7. Contributors are entitled to receive 30 copies gratis of their paper. Any additional copies required may be had, at their own expense, on application to Messrs Neill & Co., Printers, Causewayside, Edinburgh. Such application must be made before the volume in which the paper appears is issued to Fellows of the Society.

Forms of Bequest.

[With the object (1) of presenting collections of antiquities, books, etc., or aiding the funds of the Society for the purchase of such articles; or (2) to provide funds for excavation¹; or (3) to contribute to the Special Purchase Fund created in March 1948 for enabling the Society to procure for the National Museum of Antiquities objects of special historical and antiquarian interest relating to Scotland which might otherwise be bought up and dispersed at prices beyond the reach of the Society's ordinary income.]

(1) I, A. B., do hereby leave and bequeath to the Society of Antiquaries of Scotland incorporated by Royal Charter, my collection of _____ and I direct that the same shall be delivered to the said Society on the receipt of the Secretary or Treasurer thereof.

(2) I, A. B., do hereby leave and bequeath to the Society of Antiquaries of Scotland incorporated by Royal Charter, the sum of £ _____ sterling [for the General Fund, Excavation Fund, Special Purchase Fund, etc.], and I direct that the said sum may be paid to the said Society on the receipt of the Treasurer for the time being.

¹ Particular fields of excavation can be defined, if so desired, e.g. Roman sites, mediæval period, cairns, brochs, etc.

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Professor W. M. CALDER, M.A., LL.D., F.B.A. } (*for Foreign*
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IAN A. RICHMOND, M.A., LL.D., F.B.A., V.-P.S.A.

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Librarian—H. J. H. DRUMMOND, M.A.

Correspondence (including papers for the *Proceedings*) should be addressed to the Assistant Secretary, Society of Antiquaries of Scotland, Queen Street, Edinburgh.

Subscriptions should be sent to the Treasurer, Society of Antiquaries of Scotland, 42 Melville Street, Edinburgh.

LIST OF THE FELLOWS, CORRESPONDING MEMBERS, HONORARY FELLOWS, ETC.

OF THE

SOCIETY OF ANTIQUARIES OF SCOTLAND,

ADJUSTED TO JUNE 30, 1948. (SEE NOTE.)

PATRON :

HIS MAJESTY THE KING.

- | | |
|--|---|
| 1932.*ADAM, DAVID RANKINE, 76 Stewarton Drive, Cambuslang. | 1925. ANDERSON, ALEXANDER HUTTON, M.A., Leny House, Muithill, Perthshire. |
| 1944. ADAM, WILLIAM, C.A., J.P., 3 Dumbreck Road, Glasgow, S. 1. | 1922.*ANDERSON, ARTHUR R., 8 Park Terrace, Glasgow, C. 3. |
| 1938. AGNEW, Colonel H. C., Bonjedward House, Jedburgh. | 1940. ANDERSON, DAVID, Record Office, H.M. Register House, Edinburgh. |
| 1931. AGNEW, Rev. HUGH M., M.A., Balfour House, St. George's Street, Capetown, South Africa. | 1947. ANDERSON, JAMES, 17 Janefield Place, Dundee. |
| 1933.*ALRAA, The Most Hon. The DOWAGER MARCHIONESS OF, Culzean Castle, Maybole. | 1944. ANDERSON, Lt.-Col. JAMES F. M., 37 High View Gardens, Edgware, Middlesex. |
| 1943.*APPENSON, STEPHEN CHARLES DE LANCEY, Coupland Castle, Wooler, Northumberland. | 1944. ANDERSON, JAMES MICHE MAVOR, 64 High Street, Forres, Morayshire. |
| 1942.*ARCHERSON, Sir WALTER DE LANCEY, Bart., M.A., Coupland Castle, Wooler, Northumberland. | 1947. ANDERSON, Rev. JOHN, B.D., Cairnton, Orphir, Orkney. |
| 1946. ALFRED, CYRIL, B.A., 2 N.E. Circus Place, Edinburgh, 3. | 1944. ANDERSON, WILLIAM SCOTT, F.I.F.M., 49 Northfield Avenue, Edinburgh, 8. |
| 1929. ALEXANDER, W. M., Journalist, Hillyview Road, Culta, Aberdeenshire. | 1941. ANDERSON, Rev. WILLIAM WHITE, M.C., M.A., D.D., 12 Garscube Terrace, Edinburgh, 12. |
| 1947. ALLAN, DOUGLAS A., D.Sc., Ph.D., Royal Scottish Museum, Chambers Street, Edinburgh. | 1921. ANGUS, WILLIAM, LL.D., Keeper of the Registers and Records of Scotland, H.M. General Register House, Edinburgh, 2,— <i>Vice-President</i> . |
| 1936. ALLAN, E., F.R.C.S.Ed., West View, Rose Avenue, Elgin. | 1926.*ANGUS-BUTTERWORTH, LIONEL MILNER, M.A., V.-Pres., Ancient Monuments Society, Ashton New Hall, The Old Village, Ashton-on-Mersey, Cheshire. |
| 1939. ALLAN, Miss ELIZABETH H. M., M.A., Hesselden, Melkeriggis, Paisley. | 1910. ANNAN, J. CRAIG, Glenbank, Lenzie (<i>dec.</i>). |
| 1930. ALLAN, Mrs. H. M., 10 Ainslie Place, Edinburgh, 3. | 1947. APFLEHEY, GEORGE, 10 Duntreath Avenue, Clydebank. |
| 1937. ALLAN, JOHN, C.B., M.A., F.B.A., F.S.A., Keeper of Coins, The British Museum, London. | 1931. ARBUCKLE, WILLIAM F., M.A. H.M.I.S., 1 Murrayfield Gardens, Edinburgh, 12. |
| 1926. ALLAN, WILLIAM, M.B.E., Rosemount, Glenboig, Lanarkshire. | 1931. ARCHER, Sir GILBERT, St Ola, Park Road, Leith, Edinburgh, 6 (<i>dec.</i>). |
| 1929. ANCKORN, WILFRED LORRAINE, Three-Corner Mead, Dunton Green, Kent. | 1915.*ABGYLL, His Grace The DUKE OF, Inveraray Castle. |

An asterisk (*) denotes Life Membership.

Note.—Volumes LXXX and LXXXI being bound together as one, the List covers a two-year period, 1940-46 and 1946-47, and there is a supplementary List for the period to June 30, 1945 (see p. xxx). Where members have died or resigned during that period, the fact is noted.

For reasons of economy, names and designations of Fellows are confined to two lines each, where practicable.

- 1942.*ARMATTOE, R. E. G., F.I.S., F.Z.S., F.R.A.I.,
7 Northland Road, Londonderry.
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7 Kelviniaside Terrace West, Glasgow, N.W.
1910. ARMSTRONG, A. LESLIE, M.C., F.S.I., F.S.A., 27
Victoria Road, Stockton Heath, Warrington.
1921. ARNOTT, JAMES ALEXANDER, F.R.I.B.A., 50
Queen Street, Edinburgh, 2.
1943. ASHTON, HENRY FREDERICK, J.P., 230 Great
Western Road, Glasgow, C. 4.
1936. BAIRD, GERALD F., F.L.A.S., 111a Sinclair
Street, Helensburgh.
1922. BAIRD, SIR WILLIAM MACDONALD, J.P., F.F.S.,
7 St Colme Street, Edinburgh, 3 (dec.).
1933. BALFOUR, THE HON. JAMES MONCHEIFF, O.B.E.,
44 Gloucester Square, London, W. 2 (res.).
1926. BALFOUR-MELVILLE, EVAN W. M., M.A. D.Litt.,
2 South Learmonth Gardens, Edinburgh, 4.
1936. BALLANTINE, WILLIAM A., F.R.I.C.S., 10 Murray-
field Gardens, Edinburgh, 12.
1940. BANKS, GEORGE DONALD, Cairnig, Park Road,
Bishopbriggs, Glasgow.
1946. BANNAN, ANTHONY CHARLES, 26 Lindores Drive,
Tranent, E. Lothian.
- 1925.*BANNERMAN, Captain RONALD R. BRUCE, M.C.,
c/o British Embassy, Washington, D.C., U.S.A.
1931. BARCLAY, Rev. WILLIAM, M.A., 47 Monreith
Road, Newlands, Glasgow, S. 3.
- 1897.*BARRETT, Rev. T. RATCLIFFE, Ph.D., 7 Corrennie
Gardens, Edinburgh, 10 (dec.).
1922. BARRIE, JOHN ALEXANDER, 11 Lady Road,
Edinburgh, 9.
1910. BARBON, Rev. DOUGLAS GORDON, O.B.E., V.D.,
D.D., Ardchoille, Aberfoyle (dec.).
1923. BARBON, EVAN MACLEOD, LL.D., Editor of
The Inverness Courier, Inverness.
1946. BARBON, Mrs MARGARET INGLIS, Findowie, by
Brechin (res.).
1922. BARTON, Dr SAMUEL SAXON, O.B.E., 61 Parkfield
Road, Sefton Park, Liverpool, 17.
1931. BATHGATE, THOMAS D., 3 Hartington Gardens,
Edinburgh, 10.
1947. BATTERSVY, ALEXANDER W. M., L.R.C.S.&P.,
Royston, Leagomery Road, Wellington, Salop.
1927. BATTERSVY, JAMES, F.R.C.S.Eng., etc., Eden-
kerry, Helensburgh.
- 1930.*BAXTER, WILLIAM, Public Works Contractor,
Eakdale, 153 High Street, Tranent.
1945. BAYNHAM, JAMES FRANCIS GORDON, c/o Uni-
versity Union, Edinburgh.
1931. BEATTIE, DAVID J., Kenilworth, Talbot Road,
Carlisle.
1944. BEGG, CHARLES, Morven House, Wick.
1946. BEGG, Miss ELAIE J., c/o Westminster Bank,
Boscombe, Hants.
1935. BELL, Miss ELIZABETH TURNER, J.P., F.R.I.S.,
4 Ribbank Crescent, Edinburgh, 9 (dec.).
1937. BELL, GEORGE E. J., 113 Finborough Road,
London, S.W. 10.
- 1929.*BELL, Rev. WILLIAM NAPIER, M.A., 37 Oakfield
Avenue, Glasgow, W. 2.
1928. BENTON, Miss SYLVIA, M.A. (Camb.), B.Litt.
(Oxon.), 6 Winchester Road, Oxford.
1929. BERTHAM, DONALD, Manager, Orkney Steam
Navigation Co., Ltd., 20 East Road, Kirkwall.
1940. BETT, WALTER R., M.R.C.S., L.R.C.P., 11 The
Avenue, Bedford Park, London, W. 4.
1927. BICKERSTETH, Miss MARGUERITE ELIZABETH,
Ph.D., 32 Stafford Street, Edinburgh, 3.
- 1932.*BIRLEY, ERIC, M.B.E., M.A., F.S.A., Chester-
holm, Bordon Mill, Hexham, Northumberland.
- 1946.*BIRRELL, JAMES, 10 Cannmore Street, Dunfermline.
1909. BISHOP, ANDREW HENDERSON, Domaine de la
Forêt, Villar-sur-Ollon, Switzerland.
1937. BLACK, ANDREW, 37 Clepington Road, Mary-
field, Dundee.
- 1933.*BLACKATER, JOHN C., F.R.G.S., F.R.H.S.,
Mortyn Lodge, Douglas Pier, by Lochgoilhead,
Argyll.
1926. BLAIR, GEORGE, 48 Victoria Crescent Road,
Glasgow, W. 2 (res.).
1944. BODDIE, Professor GEORGE F., B.Sc., M.R.C.V.S.,
21 Cadogan Road, Edinburgh, 9.
1947. BODIE, W. G. ROWNSTREE, A.R.I.B.A., 32 Clifton
Road, Aberdeen.
1917. BONAR, JOHN JAMES, Eldinbrae, Lasswade.
1928. BOBENIUS, TANCRED, D.Lit., Ph.D., F.S.A., 28
Kensington Gate, London, W. 8.
1930. BOWIE, J. McLINTOCK, F.R.I.B.A., Byrlaw,
Dalbeattie Road, Dumfries.
- 1942.*BOWSER, Major D. CHARLES, O.B.E., J.P., of
Argatly and The King's Lundies, Doune.
1946. BOYD, JAMES D., D.A., Curator, The 'Old
Glasgow' Museum, People's Palace, Glasgow.
1937. BOYLE, Miss MARY E., c/o Capt. H. L. Boyle,
C.B.E., Tigh-na-graine, Comrie.
1944. BREMER, JOHN, 219 Berkeley Street, Glasgow,
C. 3.
- 1906.*BROWN, ADAM, Netherby, Galashiels.
- 1921.*BROWN, DONALD, 15 Archdeacon Crescent,
Cockerton, Darlington (dec.).
1933. BROWN, Sheriff GEORGE, Bessie House, St
Ola, Orkney (dec.).
1921. BROWN, THOMAS, A.R.I.B.A., Heriot-Watt
College, Edinburgh, 1.
1932. BROWSE, DAVID ANGUS, Brownlee Cottage,
Colston, Bishopbriggs.
- 1922.*BRUNWIN, GEORGE EUSTACE, Haverings, Rayne,
Baintree, Essex.
- 1936.*BRYCE, JAMES HUTCHINSON, Searcher of Records,
22 West Mayfield, Edinburgh, 9.

1902. BRYCE, Professor THOMAS H., M.D., LL.D., The Bridge House, Downington, Lechdale, Glos. (*dec.*).
1935. BRYDON, R. S., M.A. (Hons.), Ph.D., Breadalbane Academy, Aberfeldy, Perthshire.
1940. BUCHANAN-DUNLOP, Lt.-Col. A. H., of Drumhead, O.B.E., Lasswade, Midlothian (*dec.*).
1937. BULLIVANT, Major LINDSAY FRANK, F.R.I.B.A., F.I.A.A., 103 Bristol Road, Birmingham, 5.
1943. BULLOCH, Rev. JAMES B. P., B.D., The Manse, Trant, East Lothian.
1911. BURNETT, Rev. WILLIAM, B.D., 14 Thorn Lane, Roundhay, Leeds, 8 (*dec.*).
1947. BURNS, CHALMERS, M.A., Mus.B., King's College, Newcastle.
1934. BURNS, JOHN C., B.A., Assoc.M.Inst.C.E., 138 Newhaven Road, Edinburgh, 6.
- 1925.*BURNS, JOHN GEORGE, 2 Murrayfield Gardens, Edinburgh, 12.
1933. BURNS, THOMAS PILKINGTON, Dornoch Castle, Dornoch, Sutherland.
1925. BURNSIDE, Rev. JOHN W., M.A., Plainlee, 19 Carriagehill Drive, Paisley.
1928. BURRELL, Sir WILLIAM, Hutton Castle, Berwick-upon-Tweed.
1939. BUTCHART, CHARLES BRUCE RIVERS, M.A., The Worthys, Kingsworthy, Winchester, Hants.
- 1930.*BUTE, The Most Hon. The MARQUESS OF, K.T., Mount Stuart, Rothesay.
1936. CABLE, JAMES EWEN, M.B., Ch.B., D.P.H., 53 East High Street, Forfar.
- 1921.*CALDER, CHARLES S. T., A.R.I.A.S., Ancient Monuments Commission, South Bridge, Edinburgh.
1930. CALDER, Prof. WILLIAM M., M.A., LL.D., F.R.A., 40B George Square, Edinburgh, 8.—*Secretary for Foreign Correspondence.*
- 1919.*CALLANDER, ALEXANDER D., Lelipitiya, Ratnapura, Ceylon.
1929. CALLANDER, WILLIAM A., Writer, 100 West Regent Street, Glasgow, C. 2.
1922. CAMERON, Colonel DONALD C., C.B.E., M.A., R.A.S.C., 14 Vincent Square, London, S.W. 1.
1946. CAMERON, Capt. IAN C., Craigard, 15 Findhorn Place, Edinburgh.
1930. CAMERON, Rev. JOHN KIRKLAND, J.P., East Maids, Auchterhouse, Angus.
- 1931.*CAMERON, Neil, Mayfield, Thornhill Park, Sunderland.
1937. CAMERON, WILLIAM JOHN, J.P., Estate Office, Plichity, by Inverness.
1905. CAMERON-SWAN, Captain DONALD, F.R.A.S., "The Gables," Ravensberg Avenue, Newlands, Cape Town, South Africa.
1929. CAMPBELL, HUGH RANKIN, Ardfern, 1 Woodburn Road, Newlands, Glasgow, S. 3 (*dec.*).
- 1933.*CAMPBELL, IAIN C. GORDON, F.R.N.S., Doane College, Crete, Nebraska, U.S.A.
1947. CAMPBELL, JOHN, Station House, Forres.
1938. CAMPBELL, JOHN HOPE, W.S., 31 Moray Place, Edinburgh, 3.
1934. CAMPBELL, Rev. JOHN MCCONNACK, J.P., Tollcross Park Manse, 94 Drumover Drive, Glasgow.
1931. CANT, Rev. ALAN, D.D., D.Sc., 2 Kinburn Place, St Andrews, Fife.
1901. CAPELAE, GEORGE, 77 George Street, Edinburgh, 2.
1939. CARMICHAEL, DAN, 233 Arbroath Road, Dundee.
1923. CARMICHAEL-ARBUTHNOTT, Lieut.-Col., Balmamoon, Brechin.
1922. CARRUTHERS, ARTHUR STANLEY, A.C.A., 9 Beechwood Road, Sanderstead, Surrey.
1938. CARSON, JAMES, M.B.E., F.E.I.S., Kellimore, 41 Church Street, Brechin, Angus.
1932. CARTER, HARTLEY S., M.D., D.P.H., Public Health Laboratory, 20 Cochrane Street, Glasgow.
1896. CAW, Sir JAMES I., LL.D., Edinkerry, Lasswade, Midlothian.
1929. CHALMERS, FRANCIS, W.S., 20 Corrennie Gardens, Edinburgh, 10 (*dec.*).
1919. CHALMERS, Rev. HENRY REID, 50 Grove Road, West Ferry, Dundee, Angus.
1939. CHALMERS, IVAN B. M., M.A., LL.B., 9 Clarendon Terrace, Dundee.
1940. CHALMERS, WALTER, 5 Cameron Crescent, Edinburgh, 9.
1934. CHAPMAN, The Rt. Hon. ALLAN, M.A., M.P., "Rushdown," Upper Basildon, Berks.
1947. CHRYNE-MACPHERSON, Capt. WILLIAM D., of Dalchully, "Seafield," Alnmouth, Northumberland.
1927. CHILDE, V. GORDON, D.Litt., D.Sc., F.R.A., F.S.A. (Professor of European Archaeology, University of London), 18 Lawn Road Flats, London, N.W. 3.
1946. CHISHOLM, Rev. JAMES, 11 Eton Terrace, Edinburgh.
- 1932.*CHRISTIE, Bailie DOUGLAS MORRISON, J.P., 204 Ferry Road, Dundee.
1901. CHRISTIE, Miss ELLA R., Cowden Castle, Dollar.
1938. CLARK, JAMES ALASDAIR, Loch Leven Hotel, North Ballachulish, Ouch, Inverness-shire.
1936. CLARK, Mrs JANE INGLIS, J.P., Beaumont Lodge, 29 Greenhill Gardens, Edinburgh, 10.
1939. CLARK, WILLIAM C., 75 Cairnfield Place, Aberdeen.
1921. CLARK, WILLIAM FORDYCE, Hillsgarth, Ralta Sound, Shetland Isles (*dec.*).
1941. CLAUSEN, ERLING J. F., F.R.G.S., 5 Sycamore Place, Aberdeen.
1908. CLAY, ALEXANDER THOMSON, W.S., 18 South Learmonth Gardens, Edinburgh, 4.

1938. CLENDENIN, Major PAUL DANA, 60 Northumberland Road, North Harrow, Middlesex.
- 1929.*CLIFFORD, Mrs ELSIE MARGARET, Chandlers, Witcombe, Glos.
1916. CLOUSTON, ERIC C. T., M.R.C.S.(Eng.), L.R.C.P. (Lond.), The Chalet, Yaxley, near Eye, Suffolk.
1947. CLOUSTON, RANALD W. M., B.Sc., The Chalet, Yaxley, nr. Eye, Suffolk.
- 1922.*CLOUSTON, RONALD G., L.R.C.P., L.R.C.S.(Edin.), 10 Carrington Street, Glasgow, C. 4.
- 1921.*CLOUSTON, THOMAS H., O.R.E., 5 Atherton Drive, Wimbledon Common, London, S.W. 19.
- 1901.*COCHRAN-PATRICK, Lady, Woodside, Beith.
- 1898.*COCHRAN-PATRICK, Sir NEIL J. KENNEDY, K.B.E., of Woodside, Ladyland, Beith.
- 1919.*COCKBURN, Major ARCHIBALD F., M.B.E., R.E., 32 St. Andrew Square, Edinburgh.
1929. COCKBURN, The Very Rev. J. HUTCHISON, D.D., The Cathedral Manse, Dunblane.
1945. COCKE, WILLIAM A., Barmoor, Ryton on Tyne, Co. Durham.
1929. COLLECH, Miss V. C. C., Withyfold, Wenhams Way, Penslake, Guildford.
1936. COLQUHOUN, Sir IAIN, of Luss, Bart., K.T., D.S.O., LL.D., Rossshu, Luss (*res.*).
- 1921.*COLVILLE, Captain NORMAN R., M.C., Penheale Manor, Egloskerry, Cornwall.
1932. CONNELL, WILLIAM, 43 Chestwood Avenue, Oakland Park, Barnstaple.
1940. CONNOR, Rev. ALBERT, 8 Victoria Park Gardens, Glasgow, N.W. 1.
1933. CONNOR, Rev. John M., D.S.O., M.A., 14 Cypress Road, Newport, Isle of Wight.
1942. COOK, JOHN, M.A., The Schoolhouse, Helmsdale, Sutherland.
1938. COOK, JOHN MANUEL, B.A., 114 Brakd Road, Edinburgh, 10.
1947. COOKE, G. S. P., 87 Comely Bank Avenue, Edinburgh.
1938. COOPER, The Rt. Hon. LORD, LL.D., 16 Hermitage Drive, Edinburgh, 10.
- 1920.*COSSAR, KENNETH CHARLES, of Rosely, Maurice, wood, Milton Bridge, Midlothian.
1935. COURTNEY-LATIMER, Miss MARJORIE EILEEN, Curator, East London Museum, 8 Lake St Vincent, P.O., Cambridge, South Africa.
- 1936.*COUTTS-DUFFUS, JAMES, of Claverhouse, F.R.S.A., Claverhouse, by Dundee.
1931. COWIE, WILLIAM, Tweedville, 3 Thorburn Road, Colinton, Edinburgh, 13.
1929. COWIE, MORTON J. H., A.R.I.B.A. (no address).
- 1901.*COX, DOUGLAS H., B.A.Cantab., Greenhow, Elgin, Morayshire (*dec.*).
1935. CRAIG, JOHN, M.B., Ch.B., M.R.C.P.E., 5 Albion Terrace, Aberdeen.
1945. CRAIG, LEONARD MAXWELL, 30 Rosebank Crescent, Ayr.
1946. CRAIG, ROBERT COLTART, "Gowanbrae," Langholm, Dumfriesshire.
1925. CRAIG-BROWN, Brigadier-General E., D.S.O., 9 Forbes Street, Edinburgh, 2.
1927. CRANSTOUN, Colonel C. J. EDMONDSTOUNE D.S.O., Corehouse, Lanark.
- 1946.*CRAWFORD and BALCARRES, The Right Hon. The Earl of, Balcarres, Collinsburgh, Fife.
- 1943.*CRAWFORD, JAMES RUSSELL, Stonehurst, Linden Road, Halifax.
1931. CRICHTON, GEORGE, 6 Duncan Street, Edinburgh, 9.
1932. CRICHTON, Rev. THOMAS SMITH, M.A., The Manse, Rothiemorrian, Aberdeenshire.
- 1925.*CRICHTON-STUART, The Lord COLUM, M.P., Ardencraig, Rothesay, Bute.
1938. CROSBOROUGH, THOMAS TORRANCE, Woodlands, 9 Tinto Road, Newlands, Glasgow, S. 3.
- 1925.*CROSS, A. ROBERTSON, M.C., B.A., LL.B., Old Ballikierain, Balfon, Stirlingshire.
1937. CRUDEN, STEWART H., A.R.I.B.A., 50 Drumbrae, N., Barnton, Midlothian.
1924. CRUICKSHANK, JAMES, Westwood, Bucksburn, Aberdeenshire.
1924. CULLEN, Lt.-Col. ALEXANDER, O.B.E., T.D., County Architect, The Castle, Inverness.
1932. CUMMING, ALEXANDER, M.B., Ch.B., F.R.C.S.E., 193 Dominion Road, Auckland, New Zealand.
1907. CUMMING, ALEXANDER D., Auchengower, Brackland Road, Callander (*dec.*).
- 1927.*CUMMING, VICTOR JAMES, 8 Grosvenor Terrace, Glasgow, W. 2.
1893. CUNNINGTON, Captain B. HOWARD, 33 Long Street, Devizes, Wiltshire.
- 1893.*CURL, ALEXANDER O., C.V.O., LL.D., F.S.A., Ormsacre, Barnton Avenue, Edinburgh, 4.
1933. CURL, Lt.-Col. ALEX. T., D.S.O., M.B.E., British Legation, Addis Ababa, Ethiopia.
1934. CURL, Mrs ALEXANDER T., F.S.A., Chilfrone Cottage, Maiden Newton, Dorset.
1944. CURRIE, WALTER T., M.A., 10 Roman Road, Gavinburn, Old Kilpatrick, Dumbartonshire.
1926. CUTBERTSON, WILLIAM F., Librarian, The Public Library, Hawick (*dec.*).
- 1935.*DAKERS, COLIN HUGH, M.C., Malayan Civil Service, Ipoh, F.M.S. (*dec.*).
1931. DALGETTY, ARTHUR BURNES, M.D., 14 Strips of Craigie, Dundee.
1924. DALYELL OF THE BIXES, Lieut.-Colonel G., C.I.E., The Binns, Lindlithgow.
1920. DAVIDSON, Major A. R., The Black Watch, Invernahaven, Abernethy, Perthshire (*dec.*).
1925. DAVIDSON, GEORGE M., Architect and Surveyor, 16 King Street, Stirling.

1920. DAVIDSON, JAMES, Treasurer, Carnegie Trust, 39 Morningside Park, Edinburgh, 10.
1937. DAVIDSON, JAMES, M.B., Ch.B., F.R.C.P.E., 4 Randolph Crescent, Edinburgh, 3.
1932. DAVIDSON, J. M., O.B.E., F.C.I.S., F.S.A., Griffin Lodge, Gartcosh, Glasgow.
1948. DAVIDSON, THOMAS D., 44 Fairdene Road, Coulsdon, Surrey.
1936. DAVIDSON, WILLIAM T., 36 Woodstock Road, Aberdeen.
- 1925.*DAWSON, A. HASHALL, The Vache, Chalfont St Giles, Bucks.
- 1927.*DAWSON, WARREN R., F.R.S.E., F.S.A., Simpson House, Simpson, Bletchley, Bucks.
1922. DEAS, GEORGE B., Architect and Civil Engineer, Lossiebank, Whytehouse Avenue, Kirkcaldy.
1938. DICKINSON, Professor WILLIAM CROFT, M.A., Ph.D., D.Litt., The University, Edinburgh.
1934. DICKSON, DOUGLAS STANLEY, LL.B., 8 Clarence Drive, Hyndland, Glasgow.
1946. DICKSON, ROBERT, J.P., "Davaar," Kirkintilloch.
1923. DICKSON, WALTER, Lynedoch House, Elcho Terrace, Portobello.
1895. DICKSON, WILLIAM K., LL.D., Advocate, 8 Gloucester Place, Edinburgh, 3.
1919. DISWOODIE, JOHN, Deira, Crief (dec.).
1910. DIXON, RONALD A. M. of Theatre, P.R.S.E., Theatre Hall, near Beverley, Yorkshire.
1931. DOHR, MARRYAT R., B.A.(Oxon.), Librarian, National Library of Scotland, Edinburgh.
1931. DOIG, Major WILLIAM HOWIE, C.F., Gordon Street, Elgin (dec.).
- 1947.*DON, Capt. W. G., of Maulesden, Maulesden, Brechin.
1943. DONALD, JOHN, LL.O.B., 28 Dunrobin Road, Clarkston, by Airdrie.
1939. DOUGLAS, JAMES, Ednam House, Great Bookham, Surrey.
1947. DOUGLAS, Miss MURIEL M. O., M.A., 40 Eastbury Road, Oxhey, Watford, Herts.
1947. DOVE-WILSON, Miss SHERLA, 11 Belgrave Place, Edinburgh, 4.
1927. DOW, J. GORDON, Solicitor and Joint Town Clerk, Millburn House, Crail, Fife.
1929. DRUMMOND, Mrs ANDREW L., Eadie Church Manse, Alva, Clackmannan.
1939. DRUMMOND, H. J. H., M.A., 47 Liberton Brae, Edinburgh, 9.
- 1902.*DUFF-DUNBAR, Mrs L., of Ackergill, Ackergill Tower, Wick, Caithness (dec.).
1942. DUFFUS, JOHN COVATTS, Claverhouse, by Dundee, Angus.
1945. DUKE, Capt. ROBERT GORDON, R.N. (Rtd.), Northwater House, Edzell, Angus.
- 1946.*DUNBAR, JOHN TELFER, 11 Lauder Road, Edinburgh.
1937. DUNCAN, Colonel ALAN M., T.D., 408 Albert Drive, Glasgow, S. 1.
- 1920.*DUNCAN, ALEX. M., A.R.I.B.A., c/o Commonwealth Bank of Australia, Perth, Australia.
1924. DUNCAN, GEORGE, LL.D., Advocate, 60 Hamilton Place, Aberdeen.
1934. DUNCAN, JAMES (Conservator, Anthropol. Museum, Marischal College), 13 Northfield Place, Aberdeen.
1930. DUNCAN, JOHN J., 116 Greenbank Road, Edinburgh, 10.
1932. DUNCAN, ROBERT, M.A., 294 Strathmartine Road, Dundee.
- 1946.*DUNCAN, WALTER, M.A., J.P., Newlands, Dumfries.
1921. DUNDAS, R. H., M.A., Christ Church, Oxford.
1933. DUNLAP, MAURICE P., The Dell Rapids, Minnehaha Co., South Dakota, U.S.A.
1946. DUNLOP, Mrs ANNIE I., O.B.E., D.Litt., Dunselma, Fenwick, Ayrshire.
1923. DUNLOP, Miss E. S., Huntfield, Biggar.
1923. DUNLOP, Rev. WILLIAM, M.A., Factory Cottage, Randolph Street, Buchhaven, Fife.
- 1927.*DUNN, Captain PHILIPPA, 88 Holmlea Road, Cathcart, Glasgow.
1937. DYKES, Provost THOMAS, J.P., 3 Bank Street, Angus.
1924. EADES, GEORGE E., M.A., L.C.P., 29 Eversley Road, London, S.E. 19.
1904. EELES, FRANCIS CAROLUS, O.B.E., D.Litt., F.R.Hist.S., Earham, Dunster, Somerset.
- 1923.*ELPHINSTONE, The Right Hon. Lord, K.T., LL.D., Carberry Tower, Musselburgh.
1936. FAIRBAIRN, JAMES, Shotbuda, Oxnam, Jedburgh.
1936. FAIRHURST, HORACE, M.A., Ph.D., Hopefield, Torrance, Glasgow.
1940. FAIRLIE, JAMES McLACHLAN, A.M.Inst.C.E., 15 West Maitland Street, Edinburgh, 12.
1923. FAIRLIE, REGINALD F., LL.D., R.S.A., Architect, 7 Ainslie Place, Edinburgh, 3.
- 1921.*FARMER, HENRY GEORGE, M.A., Ph.D., D.Litt., Dar As-Salam, Stirling Drive, Bearsden.
1938. FARRANT, R. D., His Honour, The Deemster, 4 Albert Terrace, Douglas, Isle of Man.
1935. FENTON, WILLIAM, 5 Meethill Road, Alyth, Perthshire.
1920. FERGUSON, FREDERIC SUTHERLAND, The Homestead, Avenue Road, Southgate, London, N. 14.
1928. FERGUSON, FREDERICK ANHELEY, Duncraig, Castle Street, Brechin.
1930. FERGUSON, HARRY SCOTT, W.S., Linden, West Park Road, Dundee.
- 1933.*FERGUSON-WATSON, HUGH, M.D., Ph.D., D.P.H., 109 Montgomery Street, Edinburgh (dec.).
1939. FERRE, Mrs ELLEN R., The Manor, King's Norton, Warwickshire.

- 1899.*FINDLAY, JAMES LESLIE, Architect, 10 Eton Terrace, Edinburgh, 4.
1936. FINLAYSON, ALEXANDER M., 31 Brown Place, Wick.
1947. FINLAYSON, JAMES A., D.A., 29A Bridge Street, Hawick.
1921. FINLAYSON, Rev. WILLIAM HENRY, The Rectory, Thelotham, Diss, Norfolk.
- 1922.*FLEMING, JOHN ARNOLD, Locksley, Helensburgh.
1943. FLETCHER, JAMES, J.P., Provost of Kirkintilloch, Netherfield, Kirkintilloch.
1938. FLETT, ANDREW B., M.B., Ch.B., 15 Walker Street, Edinburgh, 3.
1928. FLETT, JAMES, A.I.A.A., 3 Langlands Place, Dumfries.
1939. FLETT, JAMES, J.P., Bignold Park Road, Kirkwall, Orkney.
1935. FORBES, DONALD J., M.B., Ch.B., Craigmill House, Strathmartine by Dundee.
1935. FORBES, JOHN FOSTER, F.R.A.I., Solway Cottage, Broughton, by Biggar, Lanarkshire.
- 1945.*FORREST, ARCHIBALD, 1389 Pollokshaws Road, Glasgow, S. 1.
1935. FOSTER-SMITH, ALFRED HENRY, M.A., Northlands, Brighton Road, Crawley, Sussex.
1923. FRANKLYN, CHARLES A. H., M.A., M.D., B.S., Wickham Hill House, Hassocks, Sussex.
1934. FRASER, ALASDAIR, M.A., of Raonmôr, The Schoolhouse, Canon Bridge, Dingwall.
1933. FRASER, CHARLES IAN, of Reelig, M.A.(Oxon.), Reelig House, Kirkhill, Inverness-shire.
1921. FRASER, GEORGE MACKAY, Solicitor and Banker, Summerlea House, Portree, Skye.
1926. FRASER, Sir JOHN, K.C.V.O., LL.D., 20 Moray Place, Edinburgh, 3 (*dec.*).
1945. GAIN, JOHN B., Pinewood, 34 Rose Street, Thurso, Caithness.
- 1929.*GALBRAITH, J. J., M.D., D.P.H., 4 Park Street, Dingwall.
1943. GALBRAITH, ROBERT, A.R.I.A.S., L.R.I.B.A., 77 Argyll Place, Aberdeen.
1933. GALLOWAY, JAMES L., F.S.M.C., F.I.O., "Coial," Ayr Road, Cumnock, Ayrshire.
- 1930.*GALLOWAY, THOMAS L., Advocate, Auchendrane, by Ayr.
1918. GARDNER, WILLIAM, Advocate, 4 Rubislaw Terrace, Aberdeen.
1946. GARDNER, ALAN, 83 Filton Drive, Edinburgh, 5.
1925. GARDNER, GEORGE, M.C., The Kibble House, Greenock Road, Paisley.
- 1926.*GARDNER, JOHN C., Ph.D., B.L., Solicitor, Avilion, Stonehaven.
1944. GARDNER, WILLIAM REID, M.B.E., J.P., Solicitor, Milngavie, Dumbartonshire (*dec.*).
1921. GARDNER, WILLOUGHBY, D.Sc., F.S.A., Y Berffa Deganwy, North Wales.
1926. GAULD, H. DRUMMOND, Blackcroft, Midlem, Selkirk.
1941. GEMMELL, SAMUEL, Examiner R.N.T.F., 6 Grenville Road, Gourock, Renfrewshire.
1935. GENTLES, JOHN, Architect, 5 Bowling Street, Coathridge.
- 1930.*GIBB, Sir ALEXANDER, G.B.E., C.B., LL.D., Queen Anne's Lodge, Westminster (*dec.*).
- 1923.*GIBB, JOHN TAYLOR, High Street, Mauchline, Ayrshire (*dec.*).
1947. GILCHRIST, ROBERT, A.M.I.C.E., 8 Bedford Street, Greenock.
1922. GILLESPIE, JOHN, F.R.I.A.S., L.R.I.B.A., 56 Kenmore Street, Pollokshields, Glasgow.
1945. GILLET, H. M., St. Raphael's College, Oxendon Hall, Market Harborough, Leicestershire.
1946. GILLIES, DONALD, 10 Beltane Street, Glasgow, C. 3.
1924. GILLIES, Rev. WILLIAM A., B.D., D.D., The Manse, Kenmore, Perthshire.
1924. GILLON, STAIR AGNEW, Abbey St Bathans, Duns, Berwickshire.
- 1926.*GILMOUR, JOHN, 8 Mossfield Street, Springburn, Glasgow.
1922. GIVAN, RITCHIE, M.A., University Lecturer, Eladasha, 11 Clevedon Gardens, Glasgow.
- 1912.*GLADSTONE, Sir HUGH S., M.A., F.R.S.E., Capenoch, Penpont, Dumfriesshire.
1938. GLADSTONE, JOHN, M.A., Capenoch, Penpont (*res.*).
1946. GLENKIE, HENRY CHARLES, M.A., Viewfield, Torphichen Street, Bathgate.
1933. GOLDSMITH, Miss ELIZABETH, M.A.(Hons.), 14 West Holmes Gardens, Musselburgh.
1935. GOMIN-DUNCAN, Colonel ALAN, M.C., M.P., Dunbarney, Bridge of Earn, Perthshire.
1937. GOOD, ROBERT JAMES, J.P., Maybank, 32 Alnwickhill Road, Edinburgh, 9 (*dec.*).
1937. GRAEME, PATRICK SUTHERLAND, C.B.E., J.P., Grameshall, Orkney.
- 1913.*GRAHAM, ANGUS, M.A., F.S.A. (Secretary, Royal Com. Anc. and Hist. Mon., Scotland), 1 Nelson Street, Edinburgh, 3.—*Secretary.*
1933. GRAHAM, FRANCIS B., Solicitor, 61 Reform Street, Dundee (*res.*).
1917. GRAHAM, Capt. JAMES GERARD, Quinta do Alvor, Rua Azevedo Continho, Oporto, Portugal.
1944. GRAHAM-YOOLL, R. W., M.B., Ch.B.(Edin.), "Cairnton," West Linton, Peeblesshire.
1888. GRANT, Sir FRANCIS J., K.C.V.O., LL.D., W.S., 15 George Square, Edinburgh.
1929. GRANT, JOHN, Civil Servant, "Lochnagar," 35 Groathill Avenue, Craigleith, Edinburgh, 4.
1941. GRANT, ROBERT D. S., M.A.(Edin.), Seaview, Muchalls, Aberdeenshire.

- 1930.*GRANT, WALTER G., of Trunland, Hillhead, Kirkwall, Orkney (*dec.*).
1944. GRANT, WILL, 1 St. Fillan's Terrace, Edinburgh (*dec.*).
1931. GRANT, WILLIAM AENEAS, Alpha Cottage, Union Street, Kirkinilloch.
1937. GRAY, ALEXANDER, M.A., LL.B., Dunvegan, Church Avenue, Cardross, Dumbartonsire.
1944. GRAY, ALEXANDER L., 131 High Street, Inverurie, Aberdeenshire (*res.*).
1937. GRAY, FRANK, Craig Lodge, Glenprosen, Angus.
1933. GRAY, JAMES DOW, J.P., "Ballochmyle," Strathmore Avenue, Dundee, Angus.
1939. GRAY, ROBERT D., 15 Lonsdale Terrace, Edinburgh (*res.*).
1915. GRAY, WILLIAM FORBES, F.R.S.E., 8 Mansionhouse Road, Edinburgh, 9.
1943. GREENBLATT, R. I., L.R.C.P., L.R.C.S., Robroyston Hospital, Millerston, Glasgow.
- 1939.*GREENHILL, FRANK ALLEN, M.A.(Oxon.), 2 Holly Road, Broughty Ferry, Angus.
1955. GREENHILL, WILLIAM, C.A., 30 Heriot Row, Edinburgh, 3, (*dec.*).
1950. GREENLAW, Rev. JOHN, T.D., North Manse, Buckie.
1945. GRESHAM, COLIN A., Bryn Deryn, Criccieth, Caernarvonshire.
1940. GRIERSON, THOMAS, J.P., Clydesdale Bank Buildings, Wigtown.
1922. GRIEVE, WILLIAM GRANT, 10 Queensferry Street, Edinburgh, 2 (*dec.*).
1920. GUILD, JAMES HARBOWER, W.S., 5 Coates Gardens, Edinburgh, 12.
- 1907.*GUTHRIE, CHARLES, W.S., 6 Great Stuart Street, Edinburgh, 3.
1927. GUTHRIE, DOUGLAS, M.D., F.R.C.S., 21 Clarendon Crescent, Edinburgh, 4.
1928. GWYNNE, Mrs F. H. X., International Sportsmen's Club, Upper Grosvenor Street, London.
1945. HADDINGTON, The Right Hon. The EARL OF, M.C., T.D., Mellerstain, Gordon, Berwickshire, —*President*.
- 1938.*HADDOW, Rev. J. MUN, M.C., C.F., Springbank, Falkirk.
- 1933.*HAGGART, Provost JAMES DEWAR, O.B.E., J.P., Eillean Riabhach, Aberfeldy, Perthshire.
1930. HALL, W. R., J.P., F.R.S.E., Bonaly Tower, Colinton, Edinburgh.
1928. HAMILTON, Miss DOROTHY E., 5 Ainslie Place, Edinburgh, 3.
1947. HAMILTON, DOUGLAS, 338 St. Vincent Street, Glasgow.
- 1901.*HAMILTON OF DALRELL, The Right Hon. Lord, K.T., C.V.O., Dalzell, Motherwell.
1945. HAMMERT, SAMUEL H. V., 337 Kingston Road, Merton Park, London, S.W. 20.
1935. HAMPSON, CHARLES P., Wentworth, Eccles, Lancs.
1919. HANNA, Miss CHALMERS, Dalnasgudh, Killiecrankie, Perthshire.
1946. HANSEN, Rev. ROBERT B., M.A., Baptist Manse, Kirkintilloch.
1924. HARDING, WILLIAM, F.R.G.S., F.Z.S., Royal Societies Club, 35 Dover Street, London.
1920. HARDING, WILLIAM GERALD, F.L.S., F.R.S.E., Peckwater House, Charing, Kent.
- 1927.*HARRISON, EDWARD S., The Bield, Elgin.
1933. HARRISON, JAMES, M.D., J.P., 31 Howard Street, North Shields, Northumberland (*dec.*).
1938. HARRISS, Rev. ARTHUR LAURENCE, The Rectory, Great Stambidge, Rochford, Essex.
1947. HASTINGS, JAMES A. G., Solicitor, Elderslie, Galashiels.
1922. HAY, ALEXANDER MACKENZIE, "Arcadie," Barrack Lane, Aldwick, Bognor Regis, Sussex.
- 1924.*HEMP, WILFRID J., P.S.A., Bod Cywarch, Criccieth, N. Wales.
- 1927.*HENRIKEN, HUGH O'NEILL, M.A., D.Litt., Ph.D., F.S.A., M.R.I.A., Peabody Museum, Harvard University, Cambridge, Mass., U.S.A.
- 1945.*HENDERSON, DANIEL CLARK, c/o Stenhouse, 10 Victoria Chambers, Victoria Road, Dundee.
1943. HENDERSON, D. G., Winterdyne, Wick, Caithness.
1930. HENDERSON, Miss DOROTHY M., Kilchoan, Kilmelford, Argyll.
1943. HENDERSON, EDWARD, Kirk Ha', Glenoraig, Fife.
1946. HENDERSON, Miss ELIZABETH BARNON, Nether Parkley, Linlithgow.
- 1928.*HENDERSON, Rev. GEORGE D., D.D., D.Litt., 3 The Chanonry, Aberdeen.
1938. HENDERSON, G. P., M.A.(Oxon.), 13 South Bridge Street, St. Andrews.
- 1934.*HENDERSON, Mrs MABEL DAISY, 33 Seymour Street, Dundee, Angus.
1937. HENDERSON, STUART M. K., Ph.D., B.Sc., Director of Museums, Kelvingrove Museum, Glasgow, C. 3.
1931. HENDERSON, WILLIAM M.A., 63 Ashley Terrace, Edinburgh, 11.
1920. HEPBURN, W. WATT, 32 Rubislaw Den, South, Aberdeen.
- 1946.*HERREWART, Mrs D. V., Cartref, Redding, by Falkirk.
1891. HERRIES, Lieut.-Colonel WILLIAM D., of Spottes, Spottes Hall, Castle Douglas.
1934. HILLBARY, IAIN ROBERTSON, The Lodge, Edinbane, Isle of Skye.
- 1928.*HOGARTH, JAMES, Hillwood House, Clermiston Road, Edinburgh, 12.
1941. HOGG, A. H. A., F.S.A., Lecturer in Civil Engineering, 116 Barton Road, Cambridge.
1923. HOILE, HENRY JOHN, M.A., M.B., Ch.B., 145 High Street, Montrose.

1914. HOME, GORDON C., Major, R.A.S.C., Langhaugh House, Galashiels.
1926. HOOD, Mrs VIOLET M., Tredean, near Chapatow, Mon. (*dec.*).
1946. HOOPER, JOHN E., Traquair Bank, Innerleithen.
1928. HOPE, Rev. LESLIE P., M.A., Ph.D., 24 Glasgow Street, Glasgow, W. 2.
1927. HOPKINS, Rev. D. STUART, M.A., B.D., B.Litt., Ph.D., 18 Regent Terrace, Edinburgh.
- 1945.*HOUSTON, Captain JAMES, J.P., F.R.I.B.A., Whitehurst, Kilmirrie, Ayrshire.
1928. HOUSTON, KEYWORTH E., F.R.G.S., St Bernard's, The Ridgeway, Rothley, Leicester.
1932. HOW, Commander GEORGE E. P., R.N., 27 Sloane Street, London, S.W. 1.
- 1925.*HOWARD DE WALDEN, The Right Hon. Lord, Dean Castle, Kilmarnock (*dec.*).
- 1930.*HUME, Brig.-Gen. EDGAR E., M.C., LL.D., M.D., 2118 Massachusetts Avenue, N.W., Washington 8, D.C., U.S.A.
1943. HUMPHRIES, WALTER R., M.A. (Hons.), "Monkbarns," Muchalls, by Aberdeen.
- 1944.*HUNTER, CHARLES BALFOUR CLEPHAN, 19 Glencairn Drive, Glasgow, S. 1.
1927. HUNTER, JOHN, Auchentreech, by Brechin, Angus (*dec.*).
- 1932.*HUNTER, Lt.-Colonel ROBERT LESLIE, Kirkmalling, Lerbeth, Stirlingshire.
1937. HUNTER, WILLIAM CHARTERS, 56 Skirving Street, Shawlands, Glasgow.
1928. INGLIS, JOHN A., B.Sc., Achadh nan Darach, near Bridge of Oich, Invergarry.
- 1945.*INNES, BERNARD FORTESCUE of Inverisla, 35 Inverleith Row, Edinburgh, 4.
1946. INNES, Rev. GEORGE P., B.D., LL.B., South Manse, Skelmorlie, Ayrshire.
1920. INNES, Sir THOMAS, of Learney and Kinnairdy, K.C.V.O., Lord Lyon King of Arms, 35 Inverleith Row, Edinburgh.
- 1945.*IREDELL, GODFREY WILLIAM, S.S.C., Girvan House, Keswick, Cumberland.
1932. JACK, JAMES, F.L.S., 6 Alexandra Place, Arbroath.
1945. JAFFREY, GEORGE, 46 Watson Street, Aberdeen.
1945. JAMIESON, GEORGE L.A., F.R.I.A.S., L.R.I.B.A., 17 Succoth Place, Edinburgh, 12.
1918. JAMIESON, JAMES H., 14 Sciennes Gardens, Edinburgh, 9.
- 1923.*JAMIESON, JOHN BOYD, T.D., M.D., F.R.C.S.E., 43 George Square, Edinburgh, 8.
1941. JAY, RONALD L., 12 Sydenham Road, Glasgow.
- 1916.*JOHNSON, JOHN BOLAM, C.A., 12 Granby Road, Edinburgh, 9.
1946. JOHNSON, J. T. A., The Rectory, Lerwick, Shetland.
1946. JOHNSON, J. W. H., C.A., 12 Granby Road, Edinburgh.
1945. JOHNSON, NORMAN M., B.Sc., F.R.S.E., etc., The Hainin, Gaudry, by Dundee.
1944. JOHNSTON, ALEXANDER, J.P., Cathlaw, Torphichen, by Bathgate, West Lothian.
- 1902.*JOHNSTON, ALFRED WINTLE, 30 Goblins Green, Welwyn Garden City, Herts. (*dec.*).
1945. JOHNSTON, JAMES, M.A., 7 Fleurs Avenue, Dumbreck, Glasgow, S. 1.
1938. JOHNSTON, JOHN, M.B., Ch.B., D.A., 16 Woodend Place, Aberdeen.
1943. JOHNSTON, Pastor M. C. S., 16 Statt Street, Alnwick, Northumberland.
- 1930.*JONES, Mrs ENID POOLE, Glyn, West Kilbride, Ayrshire.
1938. KEEF, Miss FROEN A. M., Women's United Services Club, 23 Courtfield Gardens, London, S.W. 5.
- 1922.*KEILLER, ALEXANDER, of Morven, Ballater, Aberdeenshire.
1924. KENNEDY, JOHN, 19 East Heath Road, Hampstead, London, N.W. 3.
1930. KENNEDY, PETER, M.A., 20 Northfield Terrace, Edinburgh, 8.
1907. KENT, BENJAMIN WILLIAM JOHN, Tatefield Hall, Beckwithshaw, Harrogate.
1890. KERR, HENRY F., A.R.I.B.A., 12 East Claremont Street, Edinburgh, 7 (*dec.*).
1927. KERR, ROBERT, M.A. (Keeper of the Art and Ethnographical Department, Royal Scottish Museum), 34 Wardie Road, Edinburgh, 5,—*Curator of Coins.*
- 1911.*KITCHEN, W. T., W.S., 1 Jeffrey Avenue, Blackhall, Edinburgh, 4 (*dec.*).
1945. KILGOVER, Mrs ANNE GRANT, 5 Corstorphine Hill Avenue, Edinburgh, 12.
1940. KILPATRICK, Rev. JOHN W., B.D., Ph.D., The Manse, Garelochhead, Dumbartonshire.
- 1912.*KING, Captain CHARLES, F.S.Sc. Lond., F.C.S., 11 Kelvin Drive, Glasgow, N.W.
1938. KING, CUTHBERT, L.C.S., c/o Civil Secretariat, Lahore, Punjab (c/o Lloyds Bank, 6 Pall Mall, London).
1926. KING, Mrs ELIZA MARGARET, of Arntony, Port of Menteith, Perthshire.
1926. KINNEAR, WILLIAM FRASER ANDERSON, Colerbrooke, Kersland Drive, Milngavie.
1919. KIRKNESS, WILLIAM, Craft Studio, 34A Howe Street, Edinburgh, 3.
1927. KIRKWOOD, JAMES, Beltrees, Duncuburch Road, Oldhall, near Paisley.
- 1922.*KNEEN, Miss F. BEATRICE, Ballamoar House, Ballaugh, Isle of Man.
1946. KNIGHT, ARTHUR, B.Sc., A.R.T.C., Box 102, Crown Mines, Transvaal, S. Africa.

- 1924.*KNOX, WILLIAM BARR, Rye-field, Dalry, Ayrshire (*dec.*).
1922. LACAILLE, ARMAND D., F.S.A. (Archæologist, Wellcome Historical Medical Museum), 25 Portman Square, London, W. 1.
- 1910.*LAINIER, PERCY WARD, M.O.H., City Hall, East London, C.P., South Africa.
1923. LAMB, REV. GEORGE, B.D., c/o Royal Bank of Scotland, West End Branch, Greenock.
1947. LAMB, JAMES J., M.A., LL.B., Solicitor, 42 Melville Street, Edinburgh,—*Treasurer*
1941. LAMB, REV. JOHN ALEXANDER, B.D., Ph.D., Manse of Manor, Peebles.
- 1901.*LAMONT, SIR NORMAN, Bt., M.P., of Knockdow, Toward, Argyllshire.
1932. LANG, The Very Rev. MARSHALL B., T.D., D.D., Innisfree, Gifford, Haddington.
1932. LANG, ROBERT JAMES, J.P., "The Hollies," 63 Clapington Road, Maryfield, Dundee (*dec.*).
1943. LAWSON, LL.-COL. HAROLD A. B., 18 Orchard Road South, Edinburgh, 4.
1930. LAWSON, W. B., 1 Roseburn Gardens, Edinburgh, 12.
1934. LEACH, DR WILLIAM JOHN, Eileandonnan, Beaulieu.
1937. LEESE, JOHN, "Dhu Varran," 267 Clapington Road, Dundee.
- 1943.*LEITH-ROSS, Lieut.-Colonel W., M.C., St Colms, 7 Lennox Row, Edinburgh, 5.
1925. LESLIE, Sheriff JOHN DEAN, 16 Victoria Place, Stirling (*dec.*).
1935. LESSELLS, JAY, D.A. Edin., LL.P.A. Lond., Surma, West Kilbride, Ayrshire.
- 1902.*LEVESON-GOWER, F. S., Travellers' Club, Pall Mall, London.
1941. LEVIE, WILLIAM ELDER, Advocate in Aberdeen, 63 Hamilton Place, Aberdeen (*dec.*).
1927. LIDDELL, RUCKHAM W., W.S., Union Bank House, Pitlochry.
1935. LIDDLE, LAURENCE H., Carpenham, Rostrevor, Co. Down.
- 1928.*LIGHTBODY, Major JOHN, Oatlands, Lanark.
- 1919.*LINDSAY, Lady BROWN, Colstoun, Haddington.
1927. LINDSAY, IAN GORDON, Major, Houston House, Uphall.
1946. LINDSAY, PHILIP, Old Dene, Beckles, nr. Rye, Sussex.
1920. LINLITHGOW, The Most Hon. The MARQUESS OF, Hopetoun House, South Queensferry.
1921. LINTON, ANDREW, B.Sc., Gilmanscleuch, Selkirk.
1925. LITTLE, JOHN K., 5 Dalrymple Crescent, Edinburgh, 9.
1944. LIVINGSTONE, REV. D. M., M.A., The Manse, Glass, near Huntly, Aberdeenshire (*dec.*).
1936. LOCKHART, Mrs A. McLAREN, J.P., Strathconon, 12 Menack Road, Glasgow, S. 4.
1935. LOCKIE, JOHN R., St Ninians, 5 Cross Road, Melkieriggis, Paisley.
- 1901.*LONEY, JOHN W. M., 6 Carlton Street, Edinburgh, 4 (*dec.*).
1942. LORTIMER, HUGH, The Jeanie House, Lugar Street, Cumnock.
1946. LOTHIAN, ALEXANDER J., Technical Assistant, Royal Scottish Museum, Edinburgh.
- 1917.*LOVE, WILLIAM HENDERSON, J.P., M.A., A.Mus., Rowanbank, Craigendoran, Helensburgh.
1926. LOW, ALEXANDER, M.A., M.D., Em. Prof., Anatomy, 144 Blenheim Place, Aberdeen.
1941. LOWTHER, A. W. G., F.S.A., Capt., R.E., "The Old Quarry," Ashted, Surrey.
1934. LUMSDEN, JAMES, 130 Blenheim Place, Aberdeen.
- 1935.*LUTFORD-PIKE, JOHN DREWETT, M.A., 56 Kirkbrae, Liberton, Edinburgh, 9.
1930. LYON, DAVID MURRAY, M.D., Drumm, Bonaly, Colinton.
- 1936.*LYON, WILLIAM KIRK, W.S., 21 Lynedoch Place, Edinburgh, 3 (*dec.*).
1944. McADAM, WILLIAM L., M.B., Ch.B., 1 Abbots Close, Manor Park, Aylesbury, Bucks.
1945. McALPINE, Rev. D. S., St. Mary's Manse, South Ronaldshay, Kirkwall, Orkney.
1938. MACANDREW, Miss E., Curator, West Highland Museum, Fort William (*res.*).
- 1927.*MACAULAY, JAMES, F.S.I., F.F.S., M.T.P.I., 37 St Vincent Crescent, Glasgow, C. 3.
- 1947.*MACAULAY, WILLIAM J., D.A., 50 Pilrig Street, Edinburgh.
- 1929.*MACAULAY, JOHN DRUMMOND, Ellwyr, 69 Terregles Street, Dumfries.
1941. MACBRAN, JOHN, Solicitor, 42 Union Street, Inverness.
1932. McCABE, JAMES OSBORNE, B.A., M.A., "Pannmore," Bathgate.
1946. MCCALL, ANDREW WARNOCK, 56 Hermiston Road, Glasgow, E. 2.
1928. McCLYMONT, Rev. J. D., M.A., B.D., Manse of Old Cumnock, Cumnock, Ayrshire.
1930. MACCOLL, HUGH GEOFFREY, M.A., B.Sc., Craigharroch, Ballachulish, Argyll (*dec.*).
1930. MACCOLL, WILLIAM DUGALD, 94 Heath Street, Hampstead, London, N.W. 3.
1915. MCCORMICK, ANDREW, 66 Victoria Street, Newton-Stewart.
1924. MCCORMICK, JOHN, 380 Carnlyne Road, Glasgow, E. 2 (*dec.*).
- 1924.*McCOSH, JAMES, Solicitor, Pitcon, Dalry, Ayrshire (*dec.*).
- 1925.*MACCOWAN, Rev. RODERICK, Brass, by Portree, Isle of Skye (*dec.*).
1929. MCCRAE, THOMAS, F.R.I.A.S., 6 N.E. Circus Place, Edinburgh, 3.

1943. MACCRIMMON, MALCOLM RODERICK, of Scotford Farm, Fort Saskatchewan, Alberta, Canada.—*c/o* Mr G. C. B. Poulter, F.S.A.Scot., Collingwood Place, Camberley, Surrey.
1938. MACCULLOCH, Rev. NIGEL J. H. S.C.F., 10 Merchiston Avenue, Edinburgh, 10.
1926. MACDONALD, DONALD SOMERLED, W.S., 1 Hill Street, Edinburgh, 2.
1929. MACDONALD, HENRY LACHLAN, of Dunach, Dunach, Oban, Argyll.
1929. MACDONALD, JAMES H., M.B., Ardallie, Luss, Alexandria, Dumbartonshire.
1945. MACDOUGALL, Miss MARGARET OLIPHANT, 6 Dalneigh Road, Inverness.
1939. McDOWALL, J. KEVAN, Carsenninoch, 3 Airlour Road, Newlands, Glasgow, S. 3.
1928. MACEHERN, Rev. C. VICTOR A., M.A., The Manse, Crosetown, Kirkcudbrightshire.
1926. McERLICH, RODERICK, Factor, Ostroim House, Lochmaddy, North Uist (*dec.*).
1944. MACFADYEN, Rev. ARCHIBALD, 26 Park Avenue, Portobello (*dec.*).
1944. MACFARLANE, CHARLES WILLIAM, Ph.C., 156 Arbroath Road, Dundee.
1936. MACFARLANE, D. R., Observatory Boys' High School, Mowbray, Cape, South Africa.
1935. MACFARLANE, Captain JOHN, "Selma," 34 Derby Street, Vaucluse, N.S.W., Australia.
1943. McFARLANE, PETER NEIL, F.R.S.E., "Lalimh," Tarland, Aberdeenshire.
- 1898.*MACGILLIVRAY, of MACGILLIVRAY, C.M., M.D., D.Sc., LL.D., Chattran Croft, Crail, Fife (*dec.*).
1942. McGLASHAN, WILLIAM, 227 Queen's Road, Aberdeen.
- 1901.*MACGREGOR, ALASDAIR R., of Macgregor, Cardney, Dunkeld.
1944. McGREOR, DAVID D., North Tay House, Balfield Road, Dundee, Angus.
1933. McHARDY, IAN, Director of Education, Caithness, Randolph Place, Wick.
1938. McINNES, CHARLES THORPE (Curator of Hist. Records), White Cottage, Old Kirk Road, Edinburgh, 12.
- 1944.*McINTYRE, JAMES, F.S.A., Marycot, Clarence Gardens, Bishop Auckland, Co. Durham.
1943. MACINTYRE, Rev. JOHN, M.A., B.D., The Manse, Kilmelford, Argyll.
1913. MACINTOSH, H. B., M.B.E., Redhythe, Elgin.
1939. McINTOSH, MENDOCH, Sheriff-Clerk, "Drummond Tower," Upper Drummond, Inverness.
- 1922.*MACINTOSH, Rev. R. SMITH, Hon. C.F., 38 Coupar Angus Road, Lochee, Dundee.
1939. McINTOSH, WILLIAM, Seaforth, 34 Frederick Street, Dundee.
1940. MACKAY, The Hon. Lord, Senator of The College of Justice, 18 India Street, Edinburgh.
1925. MACKAY, DONALD, J.P., Latheronwheel House, Caithness (*res.*).
1908. MACKAY, GEORGE, M.D., F.R.C.S.E., 9 Belford Avenue, Edinburgh, 3.
1924. MACKAY, GEORGE DOBS, Beach Villa, Wellington Street, Portobello.
1946. MACKAY, JOHN D., M.A., Central Schoolhouse, Sanday, Orkney.
1932. MACKAY, J. B., A.R.I.A.S., Ministry of Works, 122 George Street, Edinburgh.
1912. MACKAY, NORMAN DOUGLAS, M.D., B.Sc., D.P.H., Dall-Avon, Aberfeldy.
1945. MACKAY, KEAY R., 5 May Terrace, Giffnock.
1939. MACKAY, Captain WILLIAM, Netherwood, Inverness.
1943. MACKAY, WILLIAM J., 219 Ferry Road, Edinburgh, 6.
1923. MACKECINIE, ROBERT G. S., R.D.A., 4 Watch Bell Street, Rye, Sussex.
1945. McKELRICAN, JAMES F., B.Sc., F.R.S.A., "Essendean," Blairgowrie, Perthshire.
1943. MACKENZIE, F. SEVERNE, M.A., M.B., The Hollies, Droitwich, Worcestershire.
1923. MACKENZIE, ALEXANDER G. R., F.R.I.B.A., Bourtie House, Inverurie, Aberdeenshire.
1919. MACKENZIE, HECTOR HUGH, J.P., "Ballone," 37 Buckstone Terrace, Edinburgh, 10.
1904. MACKENZIE, WILLIAM COOK, Deargail, St George's Road, St Margaret's-on-Thames.
1904. MACKENZIE, W. M., M.A., D.Litt., H.R.S.A., 4 Barkly Street, Cromarty.
1940. McKERRAL, ANDREW, C.I.E., M.A., B.Sc., Morton, Midcaldy, Midlothian.
1920. McKERROW, MATHEW HENRY, Solicitor, Dunard, Dumfries.
1938. MACIE, Professor J. DUNCAN, C.B.E., M.C., M.A., 9 The College, The University, Glasgow.
1926. MACIE, ROBERT L., M.A., B.Litt., Abercraig, West Newport, Dundee.
1930. MacKILLIP, Rev. ALLAN MACDONALD, E.D., B.A., B.D., "Griminish," Sisley Street, St Lucia, Briabane, Queensland, Australia.
1930. MACKINNON, BENJAMIN BLACK, J.P., 20 Hutchison Drive, Canniesburn, Bearsden, Glasgow.
1931. MACKINNON, DONALD S., Leob, Elliot Place, Colinton Road, Edinburgh, 11.
1945. McKINNON, ROBERT A., F.Comm.A., Peel Hospital, Clovenfords, Galashiels.
1947. MacKINVEN, ARCHIBALD D., M.A., 34 Bailie Drive, Bearsden, Glasgow.
- 1919.*MACLAGAN, DOUGLAS PHILIP, W.S.—*Secretary*, (*dec.*).
- 1923.*MACLAGAN, Miss MORAN, Newhall, Penicuik, Midlothian.
1922. McLAREN, THOMAS, Redcliffe, Barnhill, Perth (*dec.*).

1928. MACLEAN, ARCHIBALD, "Helenslea," Bridge of Allan.
1934. MACLEAN, DUGALD, M.A., LL.B., 10 York Place, Edinburgh, 1 (*dec.*).
1939. MACLEAN, IAIN MALCOLM MACCHIMMON, M.R.C.S., Somerled Square, Portree, Skye.
1934. MACLEAN, Rev. JOHN, Manse of Lochalah, Bahmacara, Kyle, Ross-shire (*dec.*).
1932. MACLEAN, ROBERT GELLATLY, F.A.I.(Lond.), 32 Bank Street, Dundee.
1942. MACLEAN, RONALD, M.B., Ch.B., West Terrace, Ullapool, Ross-shire.
1931. McLELLAN, ROBERT A., Intergarry, Madeira Walk, Church Streeton, Shropshire (*dec.*).
- 1934.*McLEOD, ALEXANDER GRANT, M.A., "Harpedale," Campbell Street, Darvel, Ayrshire.
1939. McLEOD, ANGUS, Mount Tabor, Kinnoull, Perth.
1930. McLEOD, DONALD, 4502 West 7th Avenue, Vancouver, B.C., Canada (*res.*).
1910. McLEOD, F. T., 55 Orange Road, Edinburgh, 9.
1945. McLEOD, JAMES RHYS STUART, M.A., LL.B., 27 Gledhow Gardens, London, S.W. 5.
1924. McLEOD, Sir JOHN LORNE, G.B.E., LL.D., 72 Great King Street, Edinburgh, 3 (*dec.*).
1922. McLEOD, Rev. MALCOLM, M.A., Balquhiddy, Lochearnhead, Perthshire (*dec.*).
1925. McLEOD, Rev. WILLIAM, Ph.D., B.D., 12 Mayfield Road, Edinburgh, 9.
1919. McLENOY, Rev. CAMPBELL M., B.D., 20 Priestenden Road, St Andrews, Fife.
1933. MacMASTER, THOMAS, 190 Grange Loan, Edinburgh, 9.
1905. MacMILLAN, Rt. Hon. LORD, of Aberfeldy, P.C., G.C.V.O., Moon Hall, Eghurst, Surrey.
- 1916.*McMILLAN, Rev. WILLIAM, D.D., Ph.D., C.F., St Leonard's Manse, Dunfermline.
1928. MacMILLAN, WILLIAM E. F., F.S.A., 42 Onslow Square, London, S.W. 7.
1942. MacNAMARA, Lady, Invercharron House, Ardgay, Ross-shire.
1936. McNACHTON, DUNCAN, M.A., 12 Gladstone Place, Stirling.
1915. MacNEIL, ROBERT LISTER, of Barra, Barra House, Marlboro', Vermont, U.S.A.
1929. McNEILL, DAVID, M.A., School House, Loanhead, Midlothian.
- 1934.*McNEILL, NEIL of Ardnacross, Westlands, West Linton, Peeblesshire.
1943. MacPHERSON, DUNCAN, Glenquithel, Kyle of Lochalah, Ross-shire.
- 1909.*MacRAE, Colonel Sir COLIN WILLIAM, C.V.O., C.B.E., V.L., Colliataive, Argyll.
1945. MacRAE, ERENEZER JAMES, 9 Albert Terrace, Edinburgh.
1934. MacRAE, KENNETH, Applecross, Ross-shire.
1921. McROBBIE, WILLIAM ALEXANDER, F.S.I., 102 Dosswood Place, Aberdeen.
- 1923.*MacROBERT, Lady, B.Sc., F.G.S., Douneside, Tarland, Aberdeenshire.
1945. McTUTE, GEORGE, J.P., The Hillocks, Old Cunnock, Ayrshire.
1935. MacVICAR, NEIL, W.S., 9 Belgrave Crescent, Edinburgh, 4.
1946. MacWHIRTER, ARCHIBALD, 26 Beechlands Drive, Clarkston, Renfrewshire.
1930. MARRY, ARTHUR JAMES, The Anchorage, Drake's Avenue, Exmouth, Devon.
1945. MACKLEY, GORDON M., Overseas League Rooms, 28 Martin Place, Sydney, N.S.W.
1944. MADDOCK, A. ROY, The Priory School, Maesfen, Whitchurch, Salop.
1931. MAGIAN, ANTHONY JOHN CAFFER, M.D., B.Ch., 136 Harley Street, London, W. 1.
1901. MANN, LUDOVIC McLELLAN, 183 West George Street, Glasgow, C. 2.
- 1942.*MANSFIELD, The Rt. Hon. The EARL OF, Logie House, Methven, Perthshire.
- 1941.*MARSHALL, DAVID C., C.A., F.R.S.A., Kilmuchro Place, Broughton, Peeblesshire.
- 1945.*MARSHALL, Miss DOROTHY N., Stewart Hall, Rothesay.
1946. MARSHALL, ROBERT NORMAN, Ebro, 16a Cobden Street, Dundee.
1922. MARTIN, GEORGE MACCREGON, 31 South Tay Street, Dundee.
1921. MARWICK, HUGH, O.B.E., M.A., D.Litt., Alton House, Kirkwall, Orkney.
1925. MARWICK, JAMES GEORGE, J.P., 21 Graham Place, Stronness, Orkney.
1946. MASON, J. B., 4 Thornfield Crescent, Selkirk.
- 1925.*MATHESON, NEIL, Post Office, Lerwick, Shetland.
1946. MATTHEW, JOHN FRASER, F.R.I.B.A., F.R.I.A.S., 43 Minto Street, Edinburgh.
1946. MAXWELL, GEORGE, 10 Mossview, Stepps, Lanarkshire.
- 1892.*MAXWELL, Sir JOHN STIRLING, Bt., K.T., D.L., H.R.S.A., Pollok House, Glasgow, S. 3.
1935. MAXWELL, J. HARRISON, M.A., 21 Tay Crescent, Riddrie, Glasgow.
1939. MAYES, Captain WALTER PHILIP, R.A., Museums and Art Galleries, Paisley.
- 1924.*MEIKLE, Rev. JAMES, B.D., 15 St Clair Terrace, Edinburgh, 10 (*dec.*).
- 1944.*MEIN, Miss ELIZABETH MARGARET, B.L., 7 Hope Terrace, Edinburgh, 9.
1929. MENZIES, WILLIAM, H.M. Inspector of Schools, 6 St Vincent Street, Edinburgh, 3 (*res.*).
1940. MENZIES, Dr W. MENZIES, 25 Castle Terrace, Edinburgh, 1.
1943. MERCEY, Miss FRANCES, A.R.I.B.A., 15 Pittman Place, Aberdeen.

1937. MICHIE, Miss HELLINOR T., 118 Hamilton Place, Aberdeen.
1946. MICKLEWRIGHT, Rev. F. H. A., M.A., 25 Albert Road, Whalley Range, Manchester, 16.
1934. MIDDLETON, ARTHUR PIERCE, M.A., Williamsburg, Virginia, U.S.A. (*res.*).
1937. MILLAR, CHARLES M. HEPBURN, 17 Osborne Terrace, Edinburgh, 12.
1946. MILLAR, Capt. HUGO B., Shemore, 24 Clarendon Road, Glasgow, W. 2.
1911. MILLER, STEWART NAPIER, M.A., Damhill Lodge, Corehouse, Lanark.
1943. MILLS, D. KENNETH, Gads Hill, Green Lane, Buxton, Derbyshire.
- 1944.*MILNE, ARCHIBALD, JR., C.A., North Tay Works, Loans Road, Dundee.
1923. MILNE, GEORGE, Craigellie House, Lomnay, Fraserburgh, Aberdeenshire (*dec.*).
1944. MILNE, JAMES, 58 High Street, Inverurie, Aberdeenshire.
- 1946.*MILNE, JAMES F., M.A., M.B., Ch.B., Rocksley House, Boddam, Peterhead.
1947. MILNE, MARCUS K., 34 Hammersmith Road, Aberdeen.
1943. MILNE, MATRICE, C.E., 129 Gray Street, Aberdeen.
1930. MILNE-DAVIDSON, Major JAMES, I.S.O., F.S.A. Lynwood, Ashted, Surrey.
1938. MITCHELL, Major GEORGE A. G., M.B., Ch.M., Professor of Anatomy, The University, Manchester.
1935. MITCHELL, GEORGE WILSON, The Neuk, Huntly, Aberdeenshire.
1939. MOFFAT, FORREST MUNNHEAD, "Auchenrigg," Bearsden, Dunbartonshire.
1947. MOIR, DONALD G., 2 Pentland Gardens, Edinburgh, 10.
1946. MONCHIEFF, ROBERT (Secretary, Board of Trustees), 35 Golf Course Road, Bonnyrigg, Midlothian.
1922. MOONEY, JOHN, J.P., Cromwell Cottage, Kirkwall, Orkney.
1945. MOORE, Miss NORA E. E., M.A., LL.B., 7 S.E. Circus Place, Edinburgh.
1931. MORLEY, HENRY T., J.P., B.Sc. (Archæology), Leicester House, King's Road, Reading.
- 1934.*MORRIS, S. V., "Newlands," Rowland Keld, Hutton Gate, near Guisborough, N. Yorks.
1930. MORTLOCK, Rev. WILLIAM, M.Sc., F.R.G.S., 42 Southwood Avenue, Bournemouth.
1930. MORTON, ALEXANDER SMITH, Solicitor, Victoria Street, Newton-Stewart.
1946. MOWAT, G. T., F.R.C.S., 10 Park Circus, Glasgow, C. 3.
1925. MOWAT, JOHN, 50 Southampton Drive, Glasgow, W. 2.
1941. MOWAT, Rev. MCINTOSH, B.L., Campsie Manse, Campsie Glen, Glasgow.
1946. MULLINS, Miss CONSTANCE M., Greenbank, Kilmacolin, Renfrewshire.
1934. MUNNOCH, JAMES, F.R.S.E., 15 Liberton Drive, Edinburgh, 9.
1932. MUNRO, W. A., D.Litt., 7 Laverockbank Terrace, Edinburgh, 5.
1933. MURRAY, CHARLES STEWART, 8 Hillview, Blackhall, Edinburgh.
1920. MURRAY, JAMES, J.P., Kenwood, 97 Kirkintilloch Road, Bishopbriggs, Glasgow (*res.*).
1926. MURRAY, Miss LOUISE, The White House, Anstruther, Fife.
1945. MUTCH, ARCHIBALD, B.L., Lanrigg, Ronaldshay Crescent, Grangemouth.
- 1946.*NAIEN, ERIC W. H., S.S.C., 31 Inverleith Terrace, Edinburgh.
- 1927.*NAPIER, J. G., 13 Lynedoch Place, Edinburgh, 3 (*dec.*).
1933. NAPIER, JOHN WATSON, M.B.E., M.I.Chem.E. Dunsards, Birnam, Dunkeld, Perthshire.
1923. NELSON, Mrs. Beechwood, Calderstones, Liverpool, 18.
1943. NESS, GEORGE, L.D.S., "Stratford House," Market Street, Ilkeston, Derbyshire.
1936. NICHOLAS, DONALD LOUIS, M.A., Heath Grange-Caldy, Wirral, Cheshire.
1927. NICHOLSON, CREGOR D. P., F.S.G., 51 Jersey Road, Lampton, Hounslow, Middlesex.
1941. NORMAND, The Rt. Hon. LORD, P.C., Lord of Appeal in Ordinary, 100 North Gate, Regent's Park, London, N.W.
- 1944.*NORMER, VICTOR, J.P., Wester Lea, Whitehouse Road, Barnton, Edinburgh.
1929. NOTMAN, ROBERT CARPRAE, W.S., 15 York Place, Edinburgh, 1.
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- 1946.*O'NEIL, BRYAN H. St J., M.A., F.S.A., 32 Blomfield Road, London, W. 9.
- 1922.*OUGHTERLONT, CHARLES FRANCIS, Overburn, Lanark Road, Currie, Midlothian.
1946. OUGHTERLONT OF KELLIE, The Baron (no address).
1924. OGILVIE, JAMES D., Barloch, Milngavie.
1928. OLIPHANT, Rev. JOHNSTON, B.D., Broadlin, King Edward Street, Fraserburgh.
1928. OLIPHANT, Rev. JOHNSTON, B.D., The Mause, Abercorn, South Queensferry.
1944. OLIPHANT, ROBERT BRAND, 33 Alnwickhill Road, Edinburgh, 9.
1926. OLIVER, Mrs F. S., Edgerston, near Jedburgh.

1943. PALMER, WILLIAM THOMAS, F.R.G.S., 5 Earisfield Road, Wandsworth Common, London, S.W. 18.
1939. PATERSON, JAMES GRAHAM, Wellwood, Irvine, Ayrshire.
1934. PATERSON, The Very Rev. JOHN N. M., Dervaig, P.O. Rustfontein, Kokstad Dist., East Griqualand, South Africa.
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1936. PATON, HENRY MACLEOD, 5 Little Road, Edinburgh, 9,—*Assistant Secretary and Editor*.
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1947. PERKINS, F. RUSSELL, Duntisbourne House, Cirencester, Glos.
1940. PERRIDGE, Major FRANK, S., 45 Third Avenue, Newton Park, Port Elizabeth, South Africa (*dec.*).
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1942. PHILLIPS, JAMES NICOLL, 20 American Muir Road, Downfield, Dundee.
1938. PIGGOTT, STUART, B.Litt., F.S.A. (Professor of Archaeology), 7 Gloucester Place, Edinburgh.
1940. PIGGOTT, Mrs C. M., F.S.A., 7 Gloucester Place, Edinburgh.
1926. PILKINGTON, ALAN D., Achvarasdal, Thurso, Caithness.
1939. PINE, LESLIE GILBERT, B.A.(Lond.), 20 Arundel Mansions, Fulham Road, London, S.W.6.
1939. PITT-KETHLEY, HORACE VICTOR, "Wayside," Amersham, Bucks.
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- 1901.*PORTLAND, His Grace The DUKE OF, K.G., Welbeck Abbey, Notts.
- 1937.*POULTER, GEORGE C. B., F.R.S.A.I., Collingwood Place, Camberley, Surrey.
1927. PRENTICE, JAMES, c/o Mrs Osborne, 1 Lordswood Close, Bassett, Southampton.
- 1911.*PRESTON, FRANK A. B., F.R.S.E., M.I.Struct.E., Craigrownie, Briarwell Road, Milngavie.
1900. PRINGLE, ROBERT M., Spottiswoode, Barnston Park, Davidson's Main, Edinburgh, 4.
1924. PULLAR, PETER MACDOUGALL, 30 Harelaw Avenue, Muirhead, Glasgow, S. 4 (*res.*).
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1928. QUIG, Rev. GORDON, M.A., B.D., 235 Colinton Road, Edinburgh, 11 (*dec.*).
- 1932.*QUIG, JAMES SYMINGTON, Ravenscraig, Hamilton Drive, Falkirk.
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1947. RAMSAY, Rev. DAVID, West Kirk Manse, Elderslie, Johnstone, Renfrewshire.
1932. RAMSAY, DAVID GEORGE, M.A., B.Sc., Rector of the Academy, Skair Kilnadle, Kirkcudbright.
- 1924.*RAMSAY, DOUGLAS M., J.P., Bowland, Galashiels, Selkirkshire.
1935. RANKINE, WILLIAM FRANCIS, Yew Tree Cottage, Wrecclesham, Farnham, Surrey.
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1944. REID, R. C., Cleughbrae, Dumfries.
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1935. RICE, D. TALBOT, O.B.E., M.A., D.Litt.(Oxon.), B.Sc., Professor of Fine Art, Edinburgh University, 33 Moray Place, Edinburgh, 3.
- 1928.*RICHARDSON, FRANCIS, Blairferkin, Bridge of Allan.
- 1912.*RICHARDSON, JAMES S., LL.D., Inspector of Ancient Monuments, Ministry of Works, 21 Castle Terrace, Edinburgh,—*Curator of Museum*.
1923. RICHARDSON, JOHN, W.S., 26 Rutland Square, Edinburgh, 1.
1935. RICHMOND, IAN A., M.A., LL.D., F.B.A., F.P.S.A., Lecturer in Roman-British Archaeology, King's College, Newcastle-upon-Tyne, 2,—*Curator of Museum*.
1919. RICHMOND, Professor O. L., M.A., 5 Belford Place, Edinburgh, 4.
1925. RITCHIE, Professor JAMES, M.A., D.Sc., F.R.S.E., 31 Mortonshall Road, Edinburgh, 9.
1922. RITCHIE, WILLIAM MUIR, 11 Walkinshaw Street, Johnstone, Renfrewshire.

1945. RITSON, FREDERICK A., C.A., "Holme Lea," 14 Duff Avenue, Elgin.
1907. ROBB, JAMES, LL.B., LL.D., 20 Ormidale Terrace, Edinburgh, 12.
1933. ROBE, JAMES A. T., 128 Beechwood Gardens, Ilford, Essex (*res.*).
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1940. ROBERTS, Rev. MATTHEW JOHN, M.A., A.K.C., The Rectory, Croftin, Carlisle.
1941. ROBERTSON, Miss ANNE S., M.A., 14 Harelaw Avenue, Muirhead, Glasgow, S. 4.
1927. ROBERTSON, Rev. ARCHIBALD E., M.A., B.D., 17 Cluny Gardens, Edinburgh, 10.
1937. ROBERTSON, DAVID, M.A., LL.B., S.S.C., J.P., 10 Strathearn Place, Edinburgh, 9.
1937. ROBERTSON, F. W., M.A., Ph.D., Librarian, 13 Loch Street, Wick, Caithness.
1938. ROBERTSON, FRANCIS JOHN, J.P., 11 Halles Terrace, Edinburgh, 11.
1926. ROBERTSON, GEORGE S., M.A., The Cottage, Viewfield Road, Arbroath.
1947. ROBERTSON, JOHN B. C., "Rosebery," Kirkintilloch, Dumbartonshire.
1935. ROBERTSON, RONALD MACDONALD, W.S., 20 Alva Street, Edinburgh, 2.
1926. ROBERTSON, THOMAS AITROLL, Dunvortlich, Crieff, Perthshire.
1905. ROBERTSON, W. G. AITCHISON, M.D., St Margaret's, St Valeria Road, Bournemouth (*dec.*).
1925. ROBERTSON, WALTER MUIR, M.B., Ch.B., Bank of Scotland, 87 Renfield Street, Glasgow.
- 1943.*ROBERTSON, WILLIAM JAMES, 149 Broomhill Road, Aberdeen.
1939. ROBERTSON-COLLIE, ALEXANDER, 156 Albert Road, Crosshill, Glasgow, S. 2.
1939. ROBINSON, Rev. W. EASON, M.A., LL.Th., Theological College, Rosebery Crescent, Edinburgh, 12.
1947. ROBSON, WILLIAM SCOTT, Ardul, 11 East Stewart Place, Hawick.
1947. ROE, Miss HELEN M., M.A., Coolin, Santry, Co. Dublin, Eire.
1939. ROGER, J. GRANT, B.Sc., Museum, The University, Manchester.
1928. ROGERSON, Rev. CHARLES, M.A., Villa Roma, Sandown Road, Shanklin, Isle of Wight.
1923. ROLLAND, Miss HELEN M., 6 Murrayfield Drive, Edinburgh, 12.
- 1930.*ROOY, Mrs FREDERICK J., M.A., "Scotsdene," Haslemere, Surrey.
1934. ROSENBLUM, ISAAC, 20 Shandwick Place, Edinburgh, 2.
1929. ROSS, JAMES, 10 Midmar Gardens, Edinburgh, 10.
1922. ROSS, Major JOHN, Euroa, Langbank, Renfrewshire.
1943. ROSS, Miss MARSHALL, M.A., 3 Savile Place, Edinburgh, 9 (*res.*).
1926. ROSS, Dr WINIFRED M., Auchendean, Dunlarn Bridge, Inverness-shire.
1944. ROWAN, JOHN WILSON, Schoolhouse, Bishopton, Renfrewshire.
1927. ROWATT, THOMAS, O.B.E., M.M., M.I.Mech.E., 42 Spylaw Bank Road, Colinton, Edinburgh, 13.
1915. RUSE, J. M., O.B.E., S.S.C., Clinton House, Whitehouse Loan, Edinburgh, 10 (*dec.*).
1936. RUSSELL, ARTHUR W., M.A., W.S., 25 Hope Terrace, Edinburgh, 10.
- 1930.*RUSSELL, Sir DAVID, LL.D., Rothes, Markinch, Fife.
- 1945.*RUSSELL, DAVID F. O., M.C., Rothes, Markinch, Fife.
1943. RUSSELL, FRANK, 47 Princes Street, Monifieth, Angus.
1943. RUSSELL, IAN ROBERT, M.A. (Hons. Hist.), Park House, Annan Road, Dumfries.
1914. RUSSELL, JOHN, 4 Dudley Gardens, Edinburgh (*dec.*).
- 1945.*St JOSEPH, J. K. S., M.A., Ph.D., F.G.S., F.S.A., Selwyn College, Cambridge.
1923. St VIGORS, The Hon. LORD, LL.D., 15 Grosvenor Crescent, Edinburgh, 12 (*dec.*).
- 1925.*SALVESEN, IVER R. S., Bonnington House, Kirknewton, Midlothian.
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1944. SANSONE, RONALD C., Buckinghamshire Archaeol. Society, The Museum, Church Street, Aylesbury.
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- 1910.*SCOBIE, Major IAIN H. MACRAY, The Museum Edinburgh Castle (*dec.*).
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1938. SCOTT, Miss JUDITH D. GUILLEN, 94A Cromwell Road, South Kensington, London, S.W. 7.
1935. SCOTT, LAURENCE GRAY, Rocklea, Lerwick, Shetland.
- 1931.*SCOTT, Sir W. LINDSAY, K.B.E., D.S.C., B.A., Parslow's Hillock, Princes Risborough, Bucks.
1946. SCOTT-MONCHIEFF, DAVID CHARLES, 4 Warrender Park Crescent, Edinburgh, 9.
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- 1937.*SEMPLE, WALTER, M.A., LL.B., Neidpath Whitecraigs, Renfrewshire.

- 1945.*SERVICE, DOUGLAS WILLIAM, of Torsouce, Torsouce House, Stow, Midlothian.
- 1927.*SHARP, ANDREW M., 8 South Inverleith Avenue, Edinburgh, 4.
1917. SHAW, JULIUS A., Mus.D., c/o Barclays Bank, 46 Fountain Street, Manchester, 2 (res.).
1918. SHAW, MACKENZIE S., W.S., 1 Thistle Court, Edinburgh, 2 (dec.).
1943. SHAW, MISS MARY STORRS, M.A., 5 Carill Gardens, Fallowfield, Manchester, 14 (res.).
- 1930.*SHAW, R. CUNLIFFE, M.Sc., F.R.C.S.Eng., 24 Ribblesdale Place, Preston, Lancashire.
1937. SILVER, A. S., M.B., Ch.B., B.A., The Old Parsonage, Davidson's Mains, Edinburgh.
1940. SIM, STEWART, Architect, 57 Newington Road, Edinburgh, 9.
1926. SIMPSON, RICHARD J., Hermitage, Corstorphine, Edinburgh, 12.
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1946. SINCLAIR, REV. CONSTANTINE, The Rectory, Chale, Ventnor, I.O.W.
1909. SKINNER, ROBERT TAYLOR, M.A., F.R.S.E., 35 Campbell Road, Edinburgh, 12 (dec.).
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1934. SMITH, JOHN, B.Sc., Birkhill, Coalburn, Lanarkshire.
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- 1910.*STENGER, COLONEL CHARLES LOUIS, C.B.E., D.S.O., Warmanstie, by Annan, Dumfriesshire.
1939. SQUAIR, MISS OLIVE M., 16 Kingsley Road, Wimbledon, London, S.W. 19.
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1938. STEER, KENNETH A., M.A., Ph.D., F.S.A., 3 South Bridge, Edinburgh.
1920. STEPHEN, REV. WILLIAM, B.D., D.D., 68 Gardiner Road, Edinburgh, 4 (dec.).
- 1943.*STEPHENSON, A. CLARK, LL.R.C.P. & S. (Ed. & Glas.), Braighleacainn, Oban.
1930. STEVENS, C. E., M.A., Fellow of Magdalen College, Oxford.
- 1945.*STEVENSON, ALISTAIR COMBIE c/o J. R. Oliver, W.S., Commercial Bank Buildings, Hawick.
1933. STEVENSON, LT.-COL. EDWARD D., MLC, C.V.O. (National Trust for Scotland), 4 Great Stuart Street, Edinburgh, 3.
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- 1939.*STEVENSON, ROBERT B. K., M.A., 31 Mansionhouse Road, Edinburgh, 9,—*Keeper of the Museum.*
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- 1930.*STRATHCONA AND MOUNT ROYAL, The Right Hon. LORD, 14 South Audley Street, London.
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- 1939.*STUART, LORD DAVID, Woodend, Rothesay, Bute.
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1941. TERRY-LLOYD, JOHN, 18 Berkeley Court, Summerstrand, Port Elizabeth, South Africa.
- 1920.*THOMPSON, Professor HAROLD W., D.Litt., F.R.S.E., Goldwyn Smith Hall, Cornell University, Ithaca, New York, U.S.A.
- 1906.*THOMSON, DAVID COUPER, J.P., D.L., Inveravon, Broughty Ferry.
1920. THOMSON, GEORGE CLARK, Barrister, Box 880, Swift Current, Saskatchewan, Canada.
1930. THOMSON, JAMES CORNWALLIS, C.A., 13 Loudon Terrace, Glasgow, W. 2 (*dec.*).
1913. THOMSON, JOHN GORDON, S.S.C., 54 Castle Street, Edinburgh, 2.
1927. THOMSON, J. P. GORDON, M.A., Advocate, 28 Heriot Row, Edinburgh, 3.
1931. THOMSON, J. MILLER, W.S., 5 St Colme Street, Edinburgh, 3.
1926. THOMSON, LESLIE G., A.R.S.A., 6 Ainslie Place, Edinburgh, 3.
1927. THOMSON, Mrs. Callands, West Linton, Peeblesshire.
1937. THOMSON, ROBERT, B.Sc., Ph.D., A.M.I.Mech.E., "Moorfield," Butler's Cross, Aylesbury, Bucks.
1946. THOMSON, THEODORE RADFORD F., M.A., M.D., Cricklade, Wilt.
1936. THOMSON, THOMAS LAUDER, M.D., D.P.H., 10 Southfield Avenue, Barnton, Midlothian.
1930. THORNETCROFT, WALLACE, of Dalrulzion, Chalmington, Dorchester.
1932. THRIEPLAND, PATRICK WYNDRAM MURRAY, Dryburgh Abbey, St Boswells.
- 1933.*THYNE, JAMES COWAN, St Helena, Downfield, Dundee (*dec.*).
1930. TOD, THOMAS M., West Brackly, Kinross.
1935. TOLLAND, REV. JAMES, The Manse, 3 Belmont Church Road, Strandtown, Belfast.
1941. TOMLINSON, HAROLD ELLIS, M.A., 33 Sandringham Avenue, Thornton-le-Fylde, Lancs.
1936. TOWILL, REV. EDWIN S., M.A., B.D., 32 Blacket Place, Edinburgh, 9.
- 1902.*TRAILL, Capt. H. LIONEL NORTON, F.R.G.S., c/o Post Office, Nanyuki, Kenya Colony, E. Africa.
1932. TRANTER, NIGEL G., The Cross Cottage, Aberlady, E. Lothian.
1939. TRENCH, G. MACKENZIE, O.B.E., F.R.I.B.A., Glen Morven, Forest Drive, Kingswood, Surrey.
- 1922.*TROTTER, GEORGE C., M.D., Ch.B., F.R.S.E., 17 Haslemere Road, Crouch End, London, N. 8.
1945. TROUP, ROBERT J., M.A., The Farm, Huntly, Aberdeenshire.
1924. TULLIS, Major JAMES KENNEDY, Baingie Brae, Tullibody, by Stirling (*dec.*).
1925. TULLOCH, JAMES, M.A., 5 Wilton Gardens, Glasgow, N.W.
1934. TULLOCH, ROBERT G., M.A., 10 East Camus Road, Fairmilehead, Edinburgh, 10.
1922. TURNBULL, JOHN W., Ardlamont, Kames, Tighnabrujaich, Argyll.
1946. TURNER, ERIC G., M.A., Tillydrone House, Chanonry, Old Aberdeen.
1946. TWEEDIE, JOHN, L.D.S., 27a Midmar Gardens, Edinburgh, 10.
1937. TYZACK, FRANCIS JAMES, A.R.F.S., F.R.S.A., The Manse, Lea Road, Dronfield, near Sheffield.
- 1917.*URQUHART, ALASTAIR, D.S.O., Latimer Cottage, Latimer, near Chesham, Bucks.
- 1935.*VALENTINE, WILLIAM HARRIS, The Mansion House, Auchterhouse, by Dundee.
- 1933.*VEITCH, GEORGE, C.A., 14 Chalmers Crescent, Edinburgh, 9.
1946. WADE, WILLIAM V., M.A., F.S.A., 76 St Michael's Road, Headingley, Leeds.

1928. WALKER, ALEXANDER, 424 Great Western Road, Aberdeen.
1945. WALKER, COLIN W., M.Inst.B.E., 27 Cromwell Road, Canterbury, Kent.
1928. WALKER, Rev. GEORGE A. EVERETT, Manse of Benholm, Johnshaven, Montrose.
1936. WALLACE, DAVID SWAN, W.S., 32 Ormisdale Terrace, Edinburgh, 12.
1928. WALLACE, JAMES, M.A., Rector, Vale of Leven Academy, "Glenleven," Alexandria, Dumbarton.
1936. WALLACE, Rev. WILLIAM ANGUS, The Manse of Guthrie, by Forfar.
- 1927.*WALLIS, W. CYRIL (Assistant Keeper, Royal Scottish Museum), 53 Spottiswoode Street, Edinburgh, 10.
1946. WANDS, JAMES K., 32 Darley Crescent, Troon, Ayrshire.
1919. WARR, The Very Rev. CHARLES L., C.V.O., D.D., 63 Northumberland Street, Edinburgh (res.).
1923. WARRACK, MALCOLM, 7 Oxford Terrace, Edinburgh, 4 (*dec.*).
1932. WASON, C. R., 1 Woodlands Terrace, Glasgow, C. 3.
1944. WATERS, DONALD, Caledonian Building, Bridge Street, Wick.
1916. WATSON, DAVID, R.E., Bridgend House, Brechin.
1924. WATERSTON, CHARLES, B., 25 Howard Place, Edinburgh, 4.
1904. WATLING, H. STEWARD, Architect, Plas Conwy, Gogarth, Llandudno, N. Wales.
- 1907.*WATSON, CHARLES B. BOGO, F.R.S.E., 24 Garscube Terrace, Edinburgh, 12 (*dec.*).
- 1944.*WATSON, GEORGE, M.A., 8 Salisbury Crescent, Oxford.
1924. WATSON, GEORGE MACKIE, F.R.I.B.A., 17 East Claremont Street, Edinburgh, 7.
1913. WATSON, G. P. H., F.R.I.B.A., Royal Corn. Anc. and Hist. Mon. Scotland, 3 South Bridge, Edinburgh.
1923. WATSON, HENRY MICHAEL DENNE, C.A., 12 Henderland Road, Edinburgh, 12.
- 1908.*WATSON, JOHN PARKER, W.S., Greystane, Kinellan Road, Murrayfield, Edinburgh, 12.
- 1927.*WATSON, WILLIAM ELDER, O.B.E., J.P., Moray Bank, Elgin.
1912. WATSON, WILLIAM J., LL.D., D.Litt.Celt., 17 Merchiston Avenue, Edinburgh (*dec.*).
- 1945.*WATSON, Capt. WILLIAM, R.M., of Ardlamont, Grangehill, Beith, Ayrshire.
- 1907.*WATT, JAMES, LL.D., W.S., F.P.A., 7 Blackford Road, Edinburgh, 9 (*dec.*).
1908. WATT, Very Rev. LAUCHLAN MACLEAN, M.A., D.D., LL.D., Kinloch, Lochcarton, Ross.
1943. WATT, WILLIAM, C.E., 60 E. Claremont Street, Edinburgh, 7.
- 1923.*WATT, WILLIAM J. C., M.B., Ch.B., 71 High Street, Paisley.
1942. WAUGH, WILLIAM, Palace Knows, Beattock, Dumfriesshire.
1946. WEBSTER, Miss JESSIE R., M.A., The Library, Queen's University, Belfast.
1937. WEDDERBURN, Sir ERNEST MACLAGAN, LL.B., D.Sc., LL.D., 6 Succoth Gardens, Edinburgh, 12.
- 1946.*WEIR, Rev. Professor C. J. MULLO, B.D., D.Phil., 7, The University, Glasgow.
- 1928.*WEIR, Rev. HAROLD GEORGE MULLO, M.A., The Manse, Dalry, Kirkcudbrightshire.
1925. WEIR, JAMES MULLO, S.S.C., 21 Mayfield Terrace, Edinburgh, 9.
1942. WEIR, JOHN, J.P., F.R.G.S., M.I.Mech.Eng., Dunbritton, Alderton Hill, Loughton, Essex.
1939. WEIR, Capt. JOHN L., M.A., 19 Grosvenor Crescent, Edinburgh.
1927. WEIR, WALTER, 18 Cathkin Road, Langside, Glasgow, S. 2.
1932. WESTON, PERCY WILLIAM, F.R.G.S., F.C.S., Villa Chappott, Tangier, Morocco (*dec.*).
1937. WESTWATER, ALEXANDER, Publisher, Station Road, Lochgelly, Fife.
1945. WESTWOOD, JOHN, Ivy Cottage, Torryburn, Dunfermline.
1939. WHITE, JOHN, 18a Arthur Street, Edinburgh, 6.
1945. WHITEHEAD, Lt.-Col. J. G. O., R.E., The Mount, Stromness, Orkney.
1946. WHITEHEAD, Rev. W. Y., B.D., Ph.D., The Manse, Ormiston, E. Lothian.
1900. WHITTAKER, CHARLES RICHARD, F.R.C.S., F.R.S.E., 27 Hatton Place, Edinburgh, 9.
1945. WHITTICK, ARNOLD, 59 Ernest Grove, Beckenham, Kent.
1897. WILLIAMS, H. MALLAM, J.P., 34 Southern Road, West Southbourne, Bournemouth (*dec.*).
1930. WILSON, ARTHUR, J.P., 6 Saltoun Gardens, Glasgow, W. 2.
1935. WILSON, ARTHUR W., "Rannerdale," Venturefair Avenue, Dunfermline.
1933. WILSON, DAVID, A.R.I.A.S., 15 Prospect Bank Place, Leith, Edinburgh, 6.
1945. WILSON, FREDERICK W., 33 Hillside Crescent, Edinburgh, 7.
1933. WILSON, JAMES PEARSON, Millbank, Prívick Mill, Ayr.
1934. WILSON, Lt.-Col. MAURICE J. H., Ashmore Bridge of Cally, Perthshire.
1932. WILSON, P. DOUGLAS, M.Inst.C.E., 78 Comiston Drive, Edinburgh, 10.
- 1927.*WILSON, ROBERT, 139 Princes Street, Edinburgh, 2.
1920. WISHART, DAVID, Pittarrow, Abernethy, Perthshire.
- 1945.*WISHART, DAVID SCOTT, A.M.I.C.E., 233 West Regent Street, Glasgow.

- 1934.*WISHART, FREDERICK, 632 King Street, Aberdeen (*dec.*).
 1930. WRIGHT, ALEXANDER, L.R.I.B.A., 110 Rhythwood Street, Glasgow, C. 2.
 1938. WRIGHT, Rev. RONALD SELBY, M.A., 17 Regent Terrace, Edinburgh.
 1947. WRIGHT, KENINGALE B., B.Sc., c/o Storer, 15 Armadale Street, Glasgow, E. 1.
 1927. WRIGHT, Rev. WILLIAM, M.A., B.D., 21 Clincart-hill, Rutherglen.
 1925. WYNESS, J. FENTON, F.R.I.B.A., A.I. Archts. Scot., 45 Salisbury Terrace, Aberdeen.
 1938. YATES, Miss AGNES AITKEN, B.Sc., Greentale, Ardbeg Road, Rothesay.
 1937. YOUNG, Mrs H. NUGENT, F.S.A., Little Field, Whiteleaf, near Princes Risborough, Bucks.
 1933. YOUNG, ROBERT S., J.P., Sheriff-Substitute, Fife and Kinross, Duncroft, Kinross.
 1934. YOUNG, T. P. W., A.R.I.B.A., c/o Messrs Glyn Mills & Co., Kirkland House, Whitehall, London.
 1929. YOUNGER, Mrs J. P., Arnsbrae, Cambus, Clackmannanshire.
 1939.*YULE, BRIAN JOHN GEORGE, 28 Queen's Crescent, Edinburgh, 9.

Additional Fellows for Session 1947-48

1947. AGNEW, JAMES PERCIVAL, C.A., Broadmeadows, Kilmarnock.
 1947. ARMOUR, Rev. ALFRED J., Manse of Tyrie, Aberdeenshire.
 1948. BALDWIN, ALBERT HENRY F., 87 Queens Road, Richmond, Surrey.
 1947. BUIST, Major D. S., 66 Great King Street, Edinburgh.
 1948. BURNET, Rev. GEORGE B., M.A., Ph.D., Manse of Corsock, Castle Douglas.
 1948. CARTER, CHARLES, M.Sc., 100 Cornhill Road, Aberdeen.
 1948. CLARK, Rev. IVO MACNAUGHTON, Manse of Farnell, Brechin.
 1947. CLARKE, JOHN, M.A., Kilmenny, Mansionhouse Road, Paisley.
 1947. COLLIE, GEORGE F., Solicitor, Morken, Culter, Aberdeenshire.
 1948. COOPER, ROLAND EDGAR, F.R.S.E., 74 Inverleith Row, Edinburgh.
 1948. CULLEN, ROBERT H., 64 Lauderdale Gardens, Glasgow, W. 2.
 1948. DEANS, JOHN BELL, The Manse of Dron, Bridge of Eath.
 1947. DURAND, Miss CATHERINE, 88 Holmlea Road, Catcart, Glasgow, S. 4.
 1947. FULTON, JAMES D. S., Innerbridge Villa, Guard-bridge, Fife.
 1948. GRANGE, RICHARD M. D., Aberdour School, Banstead, Surrey.
 1947. JOHNSTON, WILLIAM, 19 Royal Avenue, Chelsea, London, S.W. 3.
 1947. KILLOR, JAMES, 172 Hawkhill, Dundee.
 1948. LAMB, ALEXANDER, St Mary's College, St Andrews.
 1948. LEIGHTON, THOMAS STRACHAN, 16 Marchmont Road, Edinburgh.
 1947. MACCOLL, ALBERT EDWARD, M.I.E.E., 10 Rothesay Terrace, Edinburgh.
 1948. MACKINTOSH OF MACKINTOSH, Mrs MARGARET, Moy Hall, Inverness-shire.
 1948. McROBERTS, Rev. DAVID, St Peter's College, Cardross, Dumbartonshire.
 1948. MAITLAND, ALEXANDER, K.C., D.L., 6 Heriot Row, Edinburgh.
 1948. MAXWELL, STUART, M.A., 7 West Newington Place, Edinburgh.
 1948. PHILLIP, WILLIAM C., M.A., Schoolhouse, Kinneff, by Inverhervie.
 1948. PRINGLE, Miss JULIA L., M.B., Ch.B. (Edin.), Braefoot, Barmton, Midlothian.
 1947. QUINE, SYLVESTER, M.C., A.M.I.E.E., 62 Montpelier Park, Edinburgh.
 1948. RANKIN, Capt. Sir HUGH C. R., Bart., The Knowe, Gullane, East Lothian.
 1948. RANKIN, Lady, The Knowe, Gullane, East Lothian.
 1948. ROBERTSON, IAN H. M'K., M.A., 28 Ordnance Road, Crombie, Cairneyhill, Fife.
 1948. ROSSLYN, The Right Hon. THE EARL OF, Brook House, Brackwell, Berks.
 1948. RUTHERFORD, IAN CHARLES, W.S., 2 Darnaway Street, Edinburgh.
 1948. SAINT, REGINALD, F.R.S.A., 77 Englewood Road, Clapham Common, London, S.W. 12.
 1948. SIMPSON, Major JAMES BRIDGES, M.C., "Olrig," Kenneth Street, Wick.
 1948. SMITH, Sqn. Lt. JOHN B. GURNEY, 31 Christchurch Park, Sutton, Surrey.
 1947. STAIG, ROBERT ARNOT, M.A., Ph.D., F.R.S.E., Glendea, Hawthornden, Midlothian.
 1947. THOMAS, HOMER L., M.A., 55 Manor Place, Edinburgh.
 1948. THOMAS, DAVID BOATH, M.A., Strathview, Trinity Road, Brechin.
 1947. THOMAS, PATRICK WATT, Gowrie, Cramond, Midlothian.
 1947. TURNER, WILLIAM, M.A., 13 Roselha Terrace, Ladybank, Fife.
 1947. WATT, V. J. BUCHAN, M.B.O.U., 2 Raemoir Road, Banchoory, Kinross.
 1948. YOUNG, Rev. JOHN McCALLUM, M.A. (Hons.), B.D., Mount Pleasant Manse, Finhart Street, Greenock.

CORRESPONDING MEMBERS

- | | |
|---|--|
| 1937. ANDERSON, R. W., Whitestone Knowe, Peebles. | 1936. MOAR, PETER, 4 Thorfinn Street, Lerwick, Shetland. |
| 1923. BLACK, GEORGE F., Ph.D., 325 Watson Avenue, Lyndhurst, New Jersey, U.S.A. | 1915. MORRISON, MURDO, Lakefield, Bragar, Lewis. |
| 1927. BRENNER, SIMON, Mid Town, Freswick, Caithness. | 1931. SMITH, SAMUEL, Mumrills, Laurieston, near Falkirk. |
| 1928. FORTUNE, JOHN ROBERT, 9 Murray Place, Peebles. | 1933. YORSTON, JAMES, Yorville, Rousay, Orkney. |

HONORARY FELLOWS

1923. M. L'ABBÉ H. BREUIL, D.L.C., Hon. Professor Dept. of Archaeology, University of the Witwatersrand, Johannesburg, South Africa.
- „ Professor FRANZ CUMONT, 19 Corso d'Italia, Rome.
- „ Sir G. F. HILL, K.C.B., M.A., LL.D., Litt.D. F.B.A., F.S.A., 23 Whitehall Court, London, S.W.1.
- „ FRANK GERALD SIMPSON, M.A., 4 Sydenham Terrace, Newcastle.
1926. Professor Dr philos. A. W. BRØGGER, Bestyrer av Universitetets Oldsaksamling, Tullinløkken, Oslo, Norway.
- „ Sir ARTHUR KEITH, LL.D., M.D., D.Sc., F.R.C.S., F.R.S., Master of the Buckton Browne Farm, Downe, Farnborough, Kent.
- „ Dr R. PARIBENI, Director of the Institute of Archaeology of Rome, Museo Nazionale Romano Rome.
1927. DON HERMILIO ALCALDE DEL RIO, Torrelavega, Santander, Spain (*dec.*).
1931. Mrs M. E. CUNNINGTON, 33 Long Street, Devizes, Wiltshire.
- „ Professor Dr ROBERT ZAHN, Director bei den Staatlichen Museen, Honorar-professor an der Universität, Am Lustgarten, Berlin, O.2 (*dec.*).
1933. Professor Dr philos. HAAKON SHRETELIO, Bergens Museums Oldsamlng, Bergen, Norway.
1935. Professor GERHARD BEEST, F.S.A., Royal Irish Academy, Dublin.
1939. Professor Dr ANDREAS ALFÖLDI, Pázmány-Universität, Múzeum-Korut 6-8, Budapest, VIII.
- „ O. G. S. CRAWFORD, Nursing, Southampton.
1942. Dr M. I. ARTAMONOV, Director of the Institute of Material Culture in the Academy of Sciences, Leningrad.
1947. ALAN OBR ANDERSON, M.A., LL.D., 24 Bruce Road, Dundee.
- „ Professor A. E. VAN GIFFEN, Biologisch Archaeologisch Instituut, Rijk's Universiteit, Poststr. 6, Groningen, Holland.

LADY ASSOCIATE

1900. Professor Emeritus M. A. MURRAY, University Museum of Archaeology and of Ethnology, Downing Street, Cambridge. 99 Blincoe Grove, Cambridge.

SOCIETIES, INSTITUTIONS, &c., EXCHANGING PUBLICATIONS.

(s) = Subscribers.

BRITISH ISLES.

Scotland—

The Abbey, Fort Augustus (s).
 Aberdeen Public Library (s).
 Aberdeen University Library.
 Baillie's Institution, Glasgow.
 Berwickshire Naturalists' Club.
 Buchan Club.
 Buteshire Natural History Society.
 Dumfriesshire and Galloway Natural History and Antiquarian Society.
 Dundee Public Library (s).
 Edinburgh Architectural Association.
 Edinburgh Geological Society.
 Edinburgh Public Library.
 Edinburgh University Library.
 Elgin Literary and Scientific Society.
 *Faculty of Procurators' Library, Glasgow (s).
 Falkirk Archaeological and Natural History Society (s).
 Falkirk Public Library (s).
 Gaelic Society of Inverness.
 Glasgow Archaeological Society.
 Glasgow University Library.
 Hawick Archaeological Society.
 Hay Fleming Library, Kinburn House, St Andrews (s).
 Institute of Accountants and Actuaries in Glasgow (s).
 Mitchell Library, Glasgow.
 National Library of Scotland, Edinburgh.
 New College Library, Edinburgh.
 Orkney Antiquarian Society, Kirkwall.
 Perthshire Society of Natural Science.
 Register House, H.M., Edinburgh (Historical Department).
 Royal Commission on Ancient and Historical Monuments of Scotland.
 Royal Scottish Museum, Edinburgh.
 St Andrews University Library.
 Scottish Central Library for Students, Dunfermline (Carnegie Trust) (s).
 Scottish Ecclesiastical Society.
 Scottish National Portrait Gallery, Edinburgh.
 Signet Library, Edinburgh.

Stirling Natural History and Archaeological Society.

*Stornoway Public Library (s).

Third Spalding Club.

England—

Ashmolean Museum, Oxford (s).
 Athenæum Club, London.
 Birmingham Public Libraries (Reference Dept.) (s).
 Birmingham University Library (s).
 Bodleian Library, Oxford.
 Bristol and Gloucestershire Archaeological Society.
 British Museum Library.
 Cambridge Antiquarian Society.
 Cambridge University Library.
 Chetham's Library, Manchester.
 Courtauld Institute of Art, University of London.
 Cumberland and Westmorland Antiquarian and Archaeological Society.
 Department of British and Mediæval Antiquities, British Museum (s).
 Derbyshire Archaeological Society.
 Durham University Library (s).
 Essex Archaeological Society.
 Guildhall Library, London (s).
 Hampshire Field Club and Archaeological Society.
 Historic Society of Lancashire and Cheshire.
 Institute of Archaeology, Liverpool.
 Jesus College, Oxford (s).
 John Rylands Library, Manchester (s).
 Kent Archaeological Society.
 Leeds University Library (s).
 Liverpool Public Libraries (Reference Dept.).
 London Library (s).
 London, University of (Goldsmiths' Library) (s).
 Manchester, University of (s).
 Ordnance Survey Library, Southampton.
 Public Record Office, London.
 Royal Anthropological Institute, London.
 Royal Archaeological Institute of Great Britain and Ireland.
 Royal Historical Society, London.
 Royal Institute of British Architects, London.
 Royal Library, Windsor.
 Royal Numismatic Society, London.
 Sheffield University Library (s).

Shropshire Archaeological Society.
 Society for the Promotion of Roman Studies,
 London.
 Society of Antiquaries of London.
 Society of Antiquaries of Newcastle-on-Tyne.
 Somerset Archaeological and Natural History
 Society.
 Surrey Archaeological Society.
 Sussex Archaeological Society.
 Victoria and Albert Museum, London.
 Viking Society for Northern Research.
 Wiltshire Archaeological Society.
 Yorkshire Archaeological Society.

Wales—

Archæological, Archaeological and Historic Society
 of Chester and North Wales.
 Cambrian Archaeological Association.
 Carmarthenshire Antiquarian Society.
 National Library of Wales, Aberystwyth.
 National Museum of Wales, Cardiff (s).
 Powys-land Club, Welshpool, Mon.
 Royal Commission on Ancient and Historical
 Monuments in Wales and Monmouthshire.

Ireland—

Belfast Natural History and Philosophical Society.
 Royal Irish Academy, Dublin.
 Royal Society of Antiquaries of Ireland.
 Trinity College Library, Dublin.
 University College, Dublin (s).

OTHER COUNTRIES.

Australia—

Public Library of Victoria, Melbourne (s).

Austria—

Akademie der Wissenschaften, Vienna.
 National Library, Vienna.
 Oesterreichische Gesellschaft für Anthropologie,
 Ethnologie und Prähistorie, Vienna.

Belgium—

L'Institut Archéologique Liégeois, Liège.
 Société Archéologique de Namur.
 Société des Bollandistes, Brussels.
 Société d'Histoire et d'Archéologie de Gand.
 Société Royale d'Archéologie, Brussels.

Bulgaria—

L'Institut Archéologique Bulgare, Sofia.

Canada—

Royal Canadian Institute, Toronto.
 Royal Ontario Museum of Archæology, Toronto.

Czecho-Slovakia—

Institut Archéologique de l'Etat tchécoslovaque,
 Prague.
 National Bohemian Museum, Prague.
 Société Archéologique de Moravie, Brno.

Denmark—

Royal Library, Copenhagen.
 Royal Society of Northern Antiquaries,
 Copenhagen.

Eathonia—

University Library, Tartu.

Finland—

Société Finlandaise d'Archéologie, Helsinki.

France—

Académie des Inscriptions et Belles Lettres,
 Paris.
 Bibliothèque d'Art et d'Archéologie, Université
 de Paris.
 Bibliothèque de l'Université, Sorbonne, Paris (s).
 Bibliothèque Nationale, Paris.
 L'Institut de Paléontologie Humaine, Paris.
 Société des Antiquaires de l'Ouest, Poitiers.
 Société Archéologique de Montpellier.
 Société Nationale des Antiquaires de France,
 Paris.
 Société Préhistorique Française, Paris.

Germany—

Archäologisches Institut des Deutschen Reiches
 Römisch-Germanische Kommission, Frank-
 furt a/M.
 Archiv für Kultur-geschichte, Weimar.
 Bayerische Staatsbibliothek, Munich.
 Historischer Verein für Niedersachsen.
 Kiel University.
 Landesanstalt für Volkskunde, Halle à Saale,
 Saxony.
 Landesmuseum, Hannover.
 Preussische Staatsbibliothek, Berlin.
 Public Library, Hamburg.
 Rhein-landesmuseum, Trier.
 Rheinisches Landesmuseum, Bonn.
 Römisch-Germanischen Zentral Museum, Mainz.
 Sächsische Landesbibliothek, Dresden.
 Schlesischer Alterthumsverein, Breslau.
 Städtisches Museum für Volkskunde, Leipzig.
 Verein für Nassauische Alterthumskunde, Wies-
 baden.

Holland—

Rijks-Museum van Oudheden, Leyden.

Hungary—

- Aquincumi Mzeum, Budapest.
 Archæologisches Institut D. Kön. Ung. Franz
 Joseph-Universität, Szeged.
 Archæologisches Institut der Pázmány Universität,
 Budapest.

India—

- Archæological Survey of India.
 Colombo Museum, Colombo, Ceylon.

Italy—

- British School at Rome.
 Commissione Archeologica Comunale di Roma.
 Istituto d'Archeologia, Rome.
 Istituto Italiano di Antropologia, Rome.
 Reale Accademia Nazionale dei Lincei, Rome.

New Zealand—

- Otago University Library, Dunedin.

Norway—

- Bergen Museum, Bergen.
 Foreningen til Norske Fortidsmindesterkern
 Bevaring, Oslo.
 Kongelige Norske Videnskabers Selskab,
 Trondhjem.
 Norsk Arkæologisk Selskab, Oslo.
 Norsk Folkemuseum, Oslo.
 Stavanger Museum, Stavanger.
 University of Oslo.
 Universitetets Oldsaksamling, Oslo.

Palestine—

- Department of Antiquities in Palestine,
 Jerusalem.

Poland—

- Musée Archéologique Erasie Majewski de la
 Société des Sciences de Varsovie.
 Société Préhistorique Polonaise, Poznan.

Russia—

- Académie des Sciences, Leningrad.
 Académie des Sciences d'Ukraine, Kieff.
 State Historical Museum, Moscow.

Spain—

- Servicio de Investigacion Prehistorica, Valencia.
 Sociedad Española de Antropologia, Etnologia y
 Prehistoria, Madrid.
 Sociedad General Española de Libreria, Madrid (s).

Sweden—

- Göteborg och Bohusläns Fornminnesföreningen,
 Gothenburg.
 Lund University Library.
 Nordiska Museet, Stockholm.

Royal Academy of History and Antiquities,
 Stockholm.

Royal Library, Stockholm.

Royal University Library, Upsala.

Switzerland—

- Historische und Antiquarische Gesellschaft,
 Basle.
 Musée d'Art et d'Histoire, Geneva.
 Musée National Suisse, Zürich.
 Société Suisse de Préhistoire, Frauenfeld.
 Tauschstelle der Antiquarischen Gesellschaft,
 Zürich.

Turkey—

- Türk Tarih Kurumu, Ankara.

United States of America—

- American Philosophical Society, Philadelphia (s).
 Bureau of Ethnology, Washington.
 California University, Berkeley.
 Chicago Natural History Museum.
 Chicago University Library (s).
 Cleveland Public Library, Ohio (s).
 *Columbia University, New York (s).
 Cornell University Library, Ithaca, New York.
 Detroit Public Library (s).
 Free Public Library, Boston, Mass. (s).
 Harvard College (s).
 Henry E. Huntington Library, San Marino,
 Cal. (s).
 Metropolitan Museum of Art, New York (s).
 Newberry Library, Chicago.
 New York Public Library (s).
 Peabody Museum of Archaeology and Ethnology,
 Cambridge, Mass.
 Pennsylvania Historical Society, Philadelphia (s).
 Princeton Theological Seminary, New Jersey (s).
 Public Library, Civic Center, San Francisco (s).
 Smithsonian Institution, Washington.
 University of Michigan, Ann Arbor, Mich. (s).
 University of Minnesota, Minneapolis (s).
 University of Pennsylvania, Philadelphia (s).
 University of Wisconsin, Madison, Wisconsin (s).
 Yale University Library, New Haven, Conn. (s).

Yugo-Slavia—

- Académie Royale Serbe, Belgrade.
 National Museum, Zagreb.

PERIODICALS.

- Boletín Arqueológico del Sudeste Español*, Carta-
 gena, Spain.
Bulletin Archéologique polonaise, Warsaw, Poland.
L'Anthropologie, Paris.

PROCEEDINGS

OF THE

SOCIETY OF ANTIQUARIES OF SCOTLAND

ONE HUNDRED AND SIXTY-SIXTH SESSION, 1945-1946

ANNIVERSARY MEETING, 30th November 1945.*

SIR FRANCIS J. GRANT, K.C.V.O., LL.D.,
Vice-President, in the Chair.

The Rev. Archibald E. Robertson and Mr J. S. Richardson were appointed Scrutineers of the Ballot for Office-Bearers.

The Ballot having been concluded, the Scrutineers found and declared the List of the Council for the ensuing year to be as follows:—

President.

The Right Hon. THE EARL OF HADDINGTON, M.C., T.D.

Vice-Presidents.

WILLIAM ANGUS, LL.D.

J. M. DAVIDSON, O.B.E., F.C.I.S.

Professor J. DUNCAN MACKIE, C.B.E., M.C., M.A.

Councillors.

Sir JOHN STIRLING MAXWELL, Bart.,
K.T., D.L., *Representing the Board of
Trustees.*

DAVID ROBERTSON, M.A., LL.B., S.S.C.,
J.P.

W. MACKAY MACKENZIE, M.A., D.Litt.,
H.R.S.A.

F. A. FERGUSON.

DAVID RUSSELL, LL.D.

E. W. M. BALFOUR-MELVILLE, M.A.,
D.Litt.

Brigadier-General E. CRAIG BROWN,
D.S.O.

ALEXANDER O. CURLE, C.V.O., LL.D.,
F.S.A.

WILLIAM HENDERSON, M.A.

Miss ANNE S. ROBERTSON, M.A.

* *Note.*—In this volume the Minutes of the Anniversary Meeting for 1945 and Annual Report for 1944-45 are printed at the beginning, and those for 1946 at the end, so as to co-ordinate the Report with the List of Donations and Purchases.

With the same object in view, the Annual Report and Minutes of Anniversary Meeting will in subsequent volumes be printed at the end.

Secretaries.

DOUGLAS P. MACLAGAN, W.S.

| ANGUS GRAHAM, M.A., F.S.A.

*For Foreign Correspondence.*Professor V. GORDON CHILDE, D.Litt.,
D.Sc., F.B.A., V.-P.S.A.| Professor W. M. CALDER, M.A., LL.D.,
F.B.A.*Treasurer.*

J. BOLAM JOHNSON, C.A.

Curators of the Museum.

JAMES S. RICHARDSON.

| IAN A. RICHMOND, M.A., V.-P.S.A.

Curator of Coins.

ROBERT KERR, M.A.

Librarian.

W. DOUGLAS SIMPSON, M.A., D.Litt., F.S.A.

A Ballot having been taken, the following were elected Fellows: James Francis Gordon Baynham; William A. Cocks; Godfrey William Iredell, S.S.C.; Mrs Anne Grant Kilgour; Robert Alexander McKinnon, F.Comm.A.; Captain Wm. R. M. Watson of Ardlamont; Lieut.-Colonel J. G. O. Whitehead, R.E.; Arnold Whittick.

The Secretary read the following List of Members deceased since the last Anniversary Meeting: *Honorary Fellows*—Professor H. Dragendorff; O. M. Dalton, M.A., F.B.A.; Professor Dr Ernst Fabricius. *Corresponding Member*—John Mathieson, F.R.S.E. *Fellows*—Rev. Robert S. G. Anderson, B.D.; Lieut.-Colonel Angus J. Beaton, C.M.G., V.D.; Sir D. Y. Cameron, LL.D., R.S.W., R.S.A., R.A.; Francis Chalmers, W.S.; Mrs Dorothea Chaplin; James Christison, J.P., F.L.A.; The Hon. Sir Hew H. Dalrymple, K.C.V.O., H.R.S.A.; Archibald Fairbairn; William Gemmill Chalmers Hanna, O.B.E., C.A.; Rev. Alban Heath; Miss Sybil Horn Henderson; George Erskine Jackson, O.B.E., M.C., W.S.; Mrs E. N. Kershaw, J.P.; Colonel James Hamilton Leigh; Thomas Mackenzie, J.P., F.E.I.S.; Neil Linklater McNabb; Rev. Duncan Macrae; Sir Ian Malcolm of Poltalloch, K.C.M.G., D.L., J.P.; John Nairn Marshall, M.D.; James Mathew; David Randall-MacIver, M.A., D.Sc.; John Reoch; Joseph Robison; George Souter; T. Aikman Swan, F.R.I.B.A., F.R.I.A.S.; Lieut.-Colonel William Thorburn, O.B.E.; John Hill Watson.

The Secretary read the following Report by the Council on the affairs of the Society:—

ANNUAL REPORT.

The Council herewith submits to the Fellows of the Society its Report for the year ending 30th November 1945.

<i>Fellowship.</i> —The total number of Fellows on the Roll at	
30th November 1944 was	812
At 30th November 1945 the number was	832
being an increase of	20

The number of new Fellows added to the roll during the year was 61, while 27 died, 7 resigned, and 7 allowed their membership to lapse.

Proceedings.—Volume LXXIX is still in the press, but it will contain eight papers (including Lord Normand's Address at the reopening of the Museum), together with several Notes. Of the papers, one deals with a prehistoric subject, the remaining six with subjects of later periods. Professor Childe, who has been acting as honorary Editor, has been regretfully compelled to divest himself of this responsibility after the completion of this volume.

Directorship.—During the year Professor V. Gordon Childe continued to act as Director without salary. The Council takes this opportunity of expressing its most cordial thanks to him for his untiring and public-spirited efforts, and more particularly for the splendidly successful exhibition that he organised in the Museum, as will be described in detail shortly.

Steps towards Re-opening the Museum.—The Society's Council and the Director feeling that, in view of the City's immunity from enemy attack and the large number of Dominions and American service-men visiting it on leave, some effort should be made to give such visitors and the public generally an opportunity to see specimens of Scotland's national antiquities, decided to recommend the opening of a token exhibition on the ground floor to display only objects already in the galleries and such duplicates as might be placed there without risk of significant loss to the National Collection through enemy action. Accordingly the Director and Mr J. S. Richardson, one of the Curators appointed by the Society, planned an exhibition on the ground floor that, within the limits imposed by security considerations, should give a picture of the development of culture in Scotland and also, in view of the bicentenary, commemorate the Jacobite rising of 1745. Thanks to the cordial co-operation of the Ministry of Works the ground floor was rearranged. Cases were set back to back so as to allow space for viewing the contents; the choicest sculptured stones were made visible for the first time by consigning the remainder to the stairs or cellars; inferior articles were removed from the annex to give space for movement, and the Maiden was set up on a scaffold where it could be seen. The subsequent arrangement of exhibits in the south aisle (devoted to prehistoric and Roman and Viking relics) was undertaken by the Director, in the north aisle (containing

Early Christian, mediæval and Jacobite relics) by the Curator, to whom the Society and the Nation are deeply indebted for his voluntary and eminently successful labours. The restricted number of exhibits were set out so as to tell a story and supplemented by distribution maps, photographs, plans and explanatory labels, so as to be intelligible and attractive to the general public. A number of institutions and individuals generously loaned for the occasion articles relevant to the '45 or to replace specimens in the National Collection that the Security Regulations forbade us to remove from the safety of the cellars. A six-page guide to the exhibition was prepared by Professor Childe and Mr Richardson, 500 copies being at first printed for sale at 3d.

The exhibition, under the title "From the Stone Age to the '45," was formally opened on 21st March by The Right Hon. Lord Normand, P.C., K.C.; the Lord Provost of Edinburgh being in the chair. (Lord Normand's address is printed *in extenso* in Volume LXXIX of the Society's *Proceedings*.)

On 11th April the Council of the Society decided, in view of the large number of service-men stationed in the vicinity whose only opportunity of viewing the exhibition was on Sunday, to recommend the opening of the Museum on Sunday afternoons for the present. Effect has been given to this recommendation as from Sunday, 20th May.

Since the end of hostilities in Europe, steps have been taken to give effect to the recommendation of the Standing Commission on Museums and Galleries by withdrawing from the cellars and placing on exhibition the finest pieces in the National Collection, such as the Torrs Chamfrain, the Monymusk Reliquary, St Fillan's Crozier, the Guthrie Bell, the Clanranald Collection. On the recommendation of the Council, some of these have been withdrawn from exhibition since Professor Childe gave up responsibility for the collections. At the same time, as far as the depleted staff would allow, casts and inferior duplicates in the exhibition were replaced by the choicest original specimens, and the Guide was adjusted to include these alterations before the second re-printing.

During September, with the return of attendants from service, a start has been made reinstating in their old positions in the 1st-floor gallery and the annexed safe those prehistoric objects removed for security to cellars six years previously. The Beakers, Food-Vessels, Bronze Age hoards, Cauldrons and contents, Broch relics, Azilian finds and gold ornaments have thus been restored to their appropriate places and checked against the catalogue cards. It is gratifying to report that nothing of importance has been lost or damaged in the hasty evacuation.

Attendances.—Since the exhibition was opened to the public on 21st March to 12th October, it was visited by 32,043 persons. Since this is the first record of visitors to the Museum of Antiquities alone (as distinct from

those entering the building to visit the Museum or the Portrait Gallery, or both), the monthly attendances are here tabulated:

March . . .	1582	July . . .	5308
April . . .	3020	August . . .	5956
May . . .	4111	September . . .	5695
June . . .	4397		

The success of Sunday openings is strikingly demonstrated by the following table:—

20/5/45	453	
27/5/45	249	
	<hr/>	702
3/6/45	291	
10/6/45	195	
17/6/45	361	
24/6/45	186	
	<hr/>	1033
1/7/45	221	
8/7/45	193	
15/7/45	153	
22/7/45	225	
29/7/45	210	
	<hr/>	1002
5/8/45	197	
12/8/45	205	
19/8/45	213	
26/8/45	218	
	<hr/>	833
2/9/45	201	
9/9/45	212	
16/9/45	255	
23/9/45	257	
30/9/45	322	
	<hr/>	1247

The first 500 copies of the Guide sold out in a month and a 1000 extra copies were printed. In three months these were exhausted and a revised edition of 1000 was ordered. In all, 1952 copies have been sold. These figures prove that the relics of Antiquity that the Society has done so much to amass have a wide appeal to the general public if suitably displayed, and justify the Museum's existence not only as a laboratory for historical and archaeological research, but also as an educational institution. The large attendances during the brief Sunday openings show that these meet a real demand, and provide perhaps the best opportunity for reaching those wide

masses on whose active co-operation the augmentation of the collections and the increase of archæological knowledge so often depend.

Since Professor Childe was no longer prepared to take responsibility for the safe custody of the collections after 12th October, the Council felt all articles of bullion value and unique national treasures should be removed from the glass cases in the public galleries and placed in the appropriate strong-rooms pending the release of the Keeper from the Forces, or the appointment of a salaried Director to take responsibility for such objects on behalf of the Nation, and this would have involved the depletion of the exhibition to such an extent and to the danger of breaking the terms on which relics had been accepted as to involve closing the Museum. At the last minute, however, the Scottish Home Department were able to arrange with the Scottish Education Department and the Director of the Royal Scottish Museum that Mr Finlay, of that Museum, should be seconded for half-time duty in the National Museum of Antiquities till the end of the year. The Council have gratefully accepted this offer and agreed to the continued opening of the exhibition.

Accessions.—During the year 746 objects have been added to the Collection as donations and bequests. This gratifying figure is largely due to the generosity of testators and donors who have enriched the Museum with collections that are not only large but also extremely valuable. Outstanding among these is the Clanranald Collection of Family and Jacobite relics that became the property of the Nation under the will of Angus Roderick Macdonald, 23rd Chief and Captain of Clanranald, who died on 17th March 1944. It comprises 72 specimens, including a backsword with elaborately chased silver basket hilt, said to have been presented to Prince Charles Edward by the Western Jacobites and captured with his baggage at Culloden; a single-edged sword, with iron basket hilt inlaid with silver and Andrea Ferrara blade; a smooth bore fowling-piece of the same age and style; a silver spoon belonging to the Prince and a quaich belonging to Flora Macdonald; articles of dress illustrative of the costume of the Highland nobility last century; and a number of personal relics acquired by members of this distinguished Scottish family. Colonel George Ian Malcolm of Poltalloch has generously donated the collection of 469 articles previously deposited in the Museum on loan by the late Sir Ian Malcolm, the donor's father. It includes the famous and beautiful Food Vessels dug up by Canon Greenwell last century, and the relics from Dunadd obtained by the excavation directed by our late Honorary Secretary, J. Hewat Craw. Mr E. H. M. Cox presented 60 Communion Tokens. Forty-four objects come as a gift from Dr Aitchison Robertson; they comprise a phosphorus bottle, a barber's bleeding-dish of brass, two horn books, a fine "Glasgow Apprentice Lantern," and an hour-glass from the Old Church of Muthill in Perthshire.

Of unique interest and exceptional value is the dress targe popularly known as "The Prince Charlie Targe," but actually bearing the Arms of the Duke of Perth, that was presented to the Nation by Mr John G. Murray of Clava. This celebrated relic is described elsewhere in the volume.

The Hon. J. Wayland Leslie of Kininvie has donated a lay figure wearing the costume of the 9th Earl of Rothes, including his Thistle Star—a very attractive as well as very valuable example of a noble's dress in the early eighteenth century—and an exquisite evening robe of a countess of the latter half of the same century, together with a glass case to contain them.

Food-Vessel Urns from Kirkbuddo and Luffness have been presented by the late Mr George Erskine Jackson and Mrs Hope of Luffness; Beaker Urns from Kirkbuddo by the late Mr George Erskine Jackson; and Cinerary Urns from Ardachy, Connel, by Mrs Lees-Milne, and from Dunragit by the Department of Agriculture for Scotland.

The Library.—The Library has been open throughout the year. The privilege of borrowing books was restored to Fellows by a resolution of the Council on 10th October 1944. It has acquired 49 volumes by donation and 6 by purchase. The end of the war and incipient return towards normal now permit the resumption of valued exchanges interrupted by hostilities. Missing publications have already been received from France, Norway, Sweden. Communication is, however, still impeded by a network of restrictions imposing the completion of innumerable forms and the waste of paper that might more profitably be used for printing the *Proceedings*.

Rhind Lectureship.—The Rhind Lectures for 1945 were given by Dr W. Mackay Mackenzie, his subject being "The Scottish Burghs." The lectures for 1946 are to be given in the spring by Professor Haakon Shetelig and in October of that year by Mr Bryan H. St John O'Neil.

The Gunning Fellowship.—No award was made for 1945.

The Chalmers-Jervise Prize.—This prize was not advertised in 1945.

WILLIAM ANGUS,
Vice-President.

Dr W. Mackay Mackenzie moved the adoption of the Report and the motion was seconded by Dr Balfour-Melville.

The Accounts of the Society for the year 1943-44, which had been circulated amongst the Fellows, were unanimously approved.

Mr F. J. Robertson moved the adoption of the Accounts and Mr J. Kevan McDowall seconded the motion. A hearty vote of thanks was accorded to the Treasurer.

I.

A BRONZE-WORKER'S ANVIL AND OTHER TOOLS RECENTLY
ACQUIRED BY THE INVERNESS MUSEUM, WITH A NOTE ON
ANOTHER SCOTTISH ANVIL. BY PROFESSOR V. GORDON
CHILDE, *Director of National Museum of Antiquities of Scotland.*

Read January 14, 1946.

The bronzes were brought by a Canadian soldier to Miss MacDougall, of the Inverness Museum, who persuaded him to present them to the Museum. From the soldier's account it seems that the find was made on the edge of Inshoch Wood, near Woodend, between Auldearn and Brodie Stations, and so between a mile and a mile and a half from the shore. Miss MacDougall sent the objects to the National Museum for treatment, and they have now been returned to Inverness.

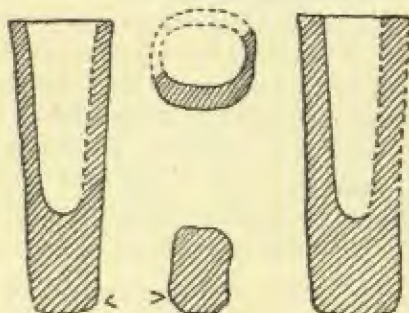


Fig. 1. Section of Hammer from Inshoch Wood. (1.)

clearly belongs to the type with a small leaf-shaped blade, but loops on the butt.¹ This is presumably a hybrid between the native looped spear-head with rhomboid blade and the intrusive pegged spear-head introduced in the Late Bronze Age, to which period the type certainly belongs.

The small *socketed hammer* (fig. 1) is similarly sand-pitted on the surface, but less seriously. The butt-end is missing, the socket broken, and the working end badly battered. The maximum length preserved is $2\frac{1}{2}$ inches, $\frac{3}{4}$ inch being solid metal; the striking surface is narrow— $\frac{3}{4}$ inch by $\frac{1}{2}$ inch. The walls of the socket expand upwards, so that at the break the cross-section approximates to a true circle; the thickness of the wall here varies from $\frac{5}{16}$ inch (corresponding to the narrow side of the end) to a bare $\frac{1}{16}$ inch above the middle of the wide side.

The *anvil's* surface is badly sand-pitted and the edges are regrettably abraded. The body's side approximates to a square $1\frac{1}{2}$ inches each way,

¹ *F.A.J.*, vol. xxxiv. p. 4; *Proc. Preh. Soc.*, 1941, pp. 129-31. Note the association of a similar spear-head with a socketed hammer and a tanged chisel at Burgess Meadow, Oxford.



1. Bronzes from Inshoch Wood, Inverness-shire. ($\frac{1}{2}$.)



2. Cast of mould (centre) from Low Glengyre (Wigtown) and casting made therefrom. ($\frac{1}{2}$.)

Ashmolean Museum, Oxford,¹ comes still nearer the Inshoch example; it has the same wedge-shaped beak, slightly flanged.

The National Museum, however, possesses yet a third Scottish Bronze Age anvil, or rather the cast of one (Pl. I, 2). In 1923 the Museum received from Mr Ludovic McLellan Mann² a cast of the valve of a stone mould found on the field of Feymore, on the farm of Low Glengyre (Kirkcolm Parish, Wigtownshire), together with a casting from it. The mould is unfortunately broken, but the metal cast made from it seems to be reliable, save in one particular to be mentioned below. It is a curious object that "somewhat resembles a palstave," $5\frac{1}{2}$ inches long, $1\frac{1}{8}$ inch wide and $1\frac{5}{8}$ inch thick at its centre. At one end it splays out like the blade of a palstave to probably $3\frac{3}{4}$ inches (half is broken away in the mould), but the other end is a button, very slightly convex, measuring $\frac{7}{8}$ inch by $1\frac{1}{8}$ inch, and roughly hexagonal in plan. The face is bordered with 2 flanges for about half its length, like a palstave. Between them, where in a palstave the end of the knee-shaft would lie, runs a thick rounded rib increasing in elevation to $\frac{5}{16}$ inch, $2\frac{1}{8}$ inches in from head. Here it breaks off in a steep curve, but its line is continued down the centre of the "blade" by a low ridge or moulding.

Mr Mann suggested that the object had been a chisel, "held like that of a modern stone-mason, by the thumb and first two fingers of the left hand, whether naked or wrapped in some cloth or skin, while the right hand plied a mallet, probably a wooden one of moderate size, against the butt." Of course had the object been a heavily used tool, the button end might have been explained as the burring due to repeated hammering on the butt, but there would be no point in carving such an elaborate head on the matrix. Actually the flanges and ridge would make the implement a most inconvenient chisel, giving no protection against the mallet blows, but threatening to squeeze the thumb or finger against the object chiselled. On the other hand, the ridges must be functional and could effectively be made use of, for instance in hammering up the embossed ridges on a shield. Interpreted as an anvil, this Glengyre specimen thus confirms the view advanced above that not only the flat striking platforms of Bronze Age anvils were utilized.

The similarity of this anvil to a palstave noted by its discoverer remains to be explained. An examination of the mould provides a clue. Now this is admittedly the only mould for an anvil extant. But Maryon's examination of the specimen from Lusmagh³ has established that anvils were in fact cast in such moulds. But the mould from Low Glengyre, I suggest, was not originally designed for casting anvils but for palstaves. From a palstave mould the central ridge, so prominent just below the head of our casting, could be produced by simply carving a new deep groove in the raised surface

¹ I owe this reference and those to Irish anvils to Mr Eoin MacWhite.

² *Proc. Soc. Ant. Scot.*, vol. lvii. pp. 105-7.

³ *Antiq. Journ.*, vol. xviii. p. 240.

representing the hollow in which one prong of the shaft would lie in a palstave; the rest of this hollow could be filled up by removal of a layer of stone above the stop-ridge. On the face of the casting just below the stop-ridge there are traces of a hollow at the base of the "splaying" blade, just before its central midrib begins, reminiscent of the hollow often found in this position on late palstaves. Furthermore, on the mould one can observe about $1\frac{1}{2}$ inch below the head a "chip" on one side of the matrix. Though partly a fracture, this notch in the side of the matrix, if reproduced in the casting, would yield an excrescence on its side precisely at the point where a loop or ear is to be expected in a palstave. I suggest that the primary mould did make provision for such an ear and that our notch marks the site of that loop.

II.

THE EXCAVATION OF THE "WAG" OR PREHISTORIC CATTLE-FOLD AT FORSE, CAITHNESS, AND THE RELATION OF "WAGS" TO BROCHS, AND IMPLICATIONS ARISING THEREFROM. BY ALEXANDER O. CURLE, C.V.O., LL.D., F.S.A., F.S.A.Scot.

Read January 13, 1947.

Since I communicated to the Society, on 25th January 1941, an account of the partial excavation of this "wag" in the previous summer, so many years have passed that some recapitulation of my previous communication may be excusable before proceeding to recount the details of further excavation and to pass comments on the results.

My attention was first directed to these structures in 1910 when examining the Ancient Monuments of Caithness for the Royal Commission on Ancient and Historical Monuments, in the parish of Latheron. They occur almost entirely in the upland part of the parish, for the most part in the straths of Berriedale and Dunbeath, with a few isolated examples at a lower level where the ground merges into the plain, as at Forse and by the broch of Yarrows. Hitherto unnoticed by modern antiquaries, they were designated on the maps of the Ordnance Survey by the comprehensive but inapplicable term of "Picts Houses." The occasional place-name "Wag" or "Wagmore" occurring in their immediate vicinity seems to indicate their original designation, a term for which a derivation has been suggested in the Gaelic word *uamh*—a cave, with its diminutive *uamheg*—pointing to the fact that the completed structure under a roof must have presented a cave-like appearance.

The individual buildings were either oblong with rounded ends, or circular; sometimes single, at other times with both forms in combination. In either case there ran around the interior a covered gallery or arcade, some 3 feet wide, the roof of which, formed of heavy slabs reaching from the wall, was supported on pillars from 5 to 6 feet apart, while other slabs, laid transversely, covered the intervening spaces. The Wag of Forse was the most extensive of these ruins, and being at the same time the most accessible, it was selected for excavation.

In appearance it was a chaotic mass of tumbled stones (Pl. II, 1), some of them of very considerable size, with here and there the head of an upright slab penetrating through the debris, or a few feet of dry-stone building exposed. Over all the mass measured 120 feet by 90, with its main axis lying approximately north to south. Superficially it appeared to consist of four oblong structures, arranged in pairs each with a different alignment, leaving an indefinite mass of ruins between them. The examination was commenced with the most southerly wag, as in it one or two upright slabs projected from the ruin, pointing to its being the best preserved. The result of this excavation, fully described in Volume LXXV of *Proceedings* (1940-41), was the exposure of an oblong building (A on plan) measuring 41 feet 9 inches in length by 15 feet in breadth, surrounded by a wall with an average width of 6 feet and remaining to a height of from 4 to 5 feet, while in the floor five pillars still remained more or less erect around the sides, one of which still supported a roofing slab (Pl. II, 2). The floor was unpaved and, to counteract the natural fall of the ground towards the entrance, it had been lowered by excavation at the inner end. In the south-east corner, to the right on entering, there was recessed a small chamber or "cabin" (B on plan), presumably intended for the cattle-herds, whose duties, besides keeping watch against intruders, human or animal, would also be to make sure that no animal having broken loose from its tether during the night should gore another. The entrance, which was in the south end, had been prolonged at a later period, and opening off the extension by way of a short passage a circular dwelling had been constructed. In this dwelling (Pl. III, 1) a circular hearth had been formed somewhat to the south of the centre, in order to leave a larger area free on the opposite side. On the latter the floor was carefully drained, and on its surface was a slight circular depression covered with minute particles of carbonised vegetable matter, possibly the remains of heather, suggesting the site of a bed. A low narrow tunnel, seemingly intended more for oral communication than for human passage, connected this house with the herd's cabin. The dwelling had been covered with a beehive roof, which had collapsed, so rendering it uninhabitable, and filling the interior with debris which quite concealed its existence prior to excavation. Such is a general statement of the results of the excavation of 1939 fully reported in detail elsewhere.



1. View across the "wag" previous to excavation.



2. View of interior of "wag."

A. O. CURLE.

THE "WAG" AT FORSE, CAITHNESS.

[To face p. 12.



1. Interior of dwelling, showing hearth.



2. Interior of supposed granary with "loading" bench in centre.



1. Doorway into the north or circular "wag."



2. Interior aspect of doorway, showing position of post-holes.



1. Doorway showing relative position of stair.



2. Stair rising to top of tower.



1. Blocked opening on side of entrance.



2. Foundation of turf wall outside western are of circular wag.



1. Dog-kennel in base of turf wall.



2. Ditch at base of hill on west.

A. O. CURLE.

THE "WAG" AT FORSE, CAITHNESS.



1. Paved area outside southern arc of circle.



2. Two kinds of walling.



1. Cooking-pot (reconstructed) found on hearth. ($\frac{1}{2}$.)

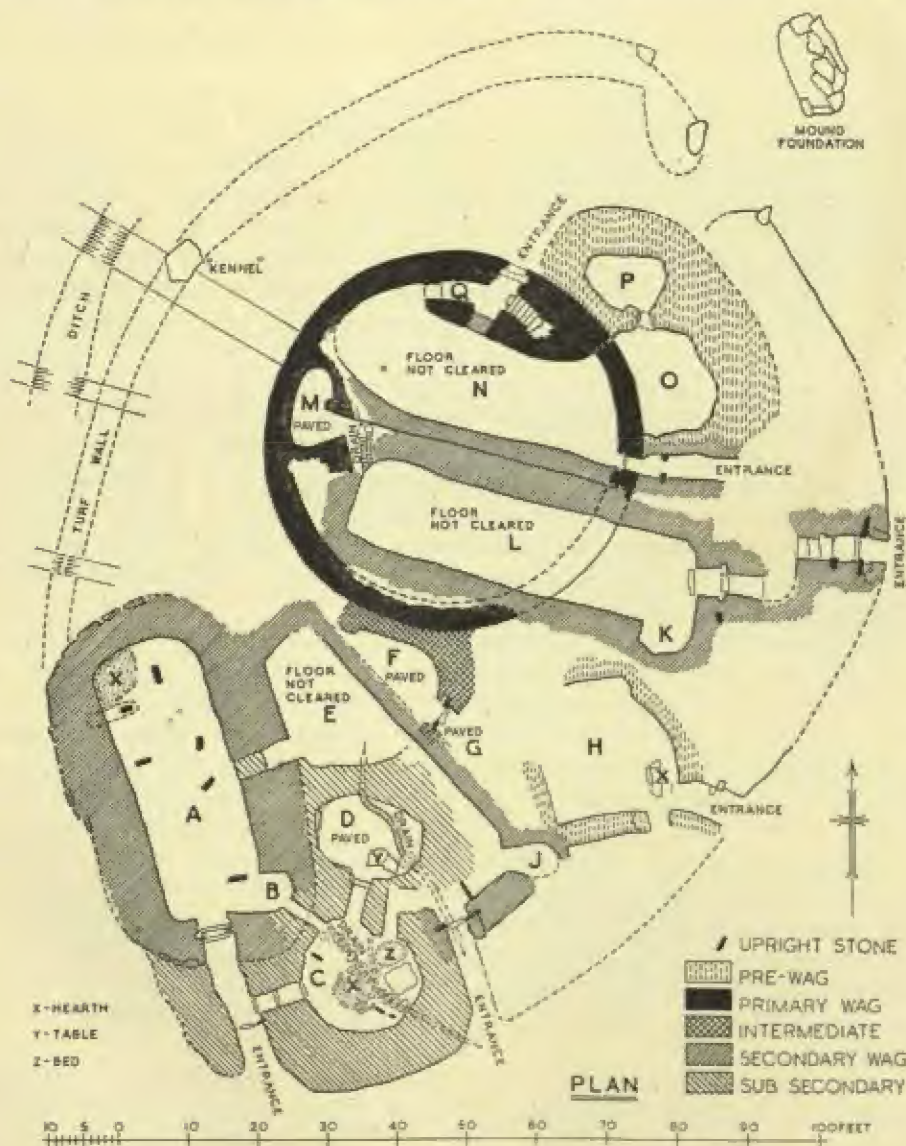


2. A section of wall, showing the character of building.

A. O. CURLE.

THE "WAG" AT FORSE, CAITHNESS.

As there was an indication that another circular construction had existed to the north of this dwelling and opening out of it, this construction was made



the first object of research last season. The removal of a mass of tumbled stones, largely the remains of a roof, exposed a round chamber (D on plan), elliptical in form and measuring on floor-level 18 feet by 20. Into this a

passage led from the adjacent dwelling C. It was obvious that the building had been erected within the second of the westmost pair of wags and so indicated the previous abandonment of that building, unless, as is possible, the inner end was still made accessible from A by a passage, subsequently closed.

When the circular chamber was cleared it presented features at variance with the preconceived notion of a dwelling (Pl. III, 2). There was no hearth or any indication of a permanent fire within it. The floor had been paved with exceptional care, the paving-stones being carefully laid in close contact. A drain ran across it, and a luting of clay was observed at the junction of wall and floor. Moreover, on the right of the entrance, just within the circle there was a unique feature—a table or bench 1 foot in height, constructed of flat stones, formed in two sections set anglewise and measuring 3 feet in medial length by 1 foot 8 inches in breadth. It stood 2 feet back from the entrance at one end and only 4 inches off the wall at the other. As there is abundant evidence for the consumption of grain in the finding of querns in brochs and other dwellings of this period, there must have been storehouses or granaries for its conservation, and it is suggested that this chamber, so carefully paved and drained, is such a place—while the curious stone construction may well have been a loading bench, on which the receptacle to be filled, sack or creel, was placed, in order that it might the more easily be hoisted on a bearer's back.

With the collapse of the roof over the adjacent dwelling, and the consequent closing of the exit into the main passage of wag A, a fresh exit was probably provided along the side of C and through the wall into the otherwise disused entrance to the abandoned wag. There were some indications of occupation in the portion of the wag (E) into which this passage penetrated, and its doorway with its jambs and sill had been preserved. The bar-hole of the door remained, and thrust within it there was found a circular hammer-stone. Beyond the entrance any further progress into the wag was stopped by a large upright slab, possibly the stone door removed and occupying a position between the wall and the debris. Within what had evidently been the herd's cabin, provided for Wag E, there were quantities of burnt broken stones—presumably a "deer roast" of a later date. They lay in a hole, within which there was no indication of any construction.

Before directing attention to the main mass of ruins, it was considered desirable to examine certain areas which lay between them and the remains of an outer ring of large stones, evidently the base of a turf wall, which appeared to have enclosed the whole area. Considerable beds of nettles on these areas engendered the belief that these might be sites of human occupation, even of kitchen-middens, from which valuable dating material might be recovered, but such sanguine anticipations were doomed to

disappointment. A socket-stone found in one had been used with a stone door of an earlier construction. Numerous burnt broken stones at one spot pointed to another "deer roast," but here again there were no signs of construction.

The mass of ruin within the northmost wag of the group (N on plan) being less formidable than those in its neighbour, and also being at the outer edge of the ruins, was the most suitable portion to which next to turn attention. A large oblong block lying horizontally on the outer limit suggested a lintel *in situ*, and was a desirable starting-point. As the mass of displaced stones surrounding this was removed, its character as a lintel was confirmed and the doorway beneath it was exposed in complete preservation (Pl. IV, 1). Formed in massive masonry, comparable with that of the best broch construction, the doorway measured 3 feet in height and 2 feet 6 inches in width, though slightly narrower at base owing to a bulging profile of one of the basal stones.

Following the face of the wall from the door westwards a circular building was gradually exposed, which, when completely traced, measured 47 feet in interior diameter, the wall of which measured from 4 to 5 feet in thickness, and rose from a heavy scarcement course. At 4 feet within the entrance passage checks in roof and floor indicated the position of the door. There were no bar-holes, but two pointed stones inserted into the passage-way, close to the wall on either side, to a depth of 7 and 9 inches respectively, presumably preserving post-holes (Pl. IV, 2), suggested that the door had been of wood—a view confirmed by the finding of a light socket-stone of sandstone measuring 8 inches by $4\frac{1}{2}$ with a shallow worn hollow on one surface. The passage wall on the right on entering was recessed to receive the door when open. When closed it may have been held in position by a strut, as in the case of the doorway to wag A,¹ for a stone which might have been the butt against which a stay had rested, at the outer angle of the wall on the right, had been forced out of position.

Over the entrance and extending along the outer wall on either side, a tower had been constructed with a passage leading directly through it to the interior (see plan). On the left of the passage there rose a stair, incomplete where it debouched on the ruined wall-head, but still existing to the extent of seven steps (Pl. V, 1), bonded into the wall on either side, and measuring 3 feet in length by from 5 to 8 inches in height and varying from 10 to 12 inches in breadth (Pl. V, 2). On the opposite side of the entrance passage there was a chamber in the wall which, with a width of 3 feet 9 inches, ran back for a length of 5 feet 6 inches. The original entrance into the interior of the circle was directly opposite the doorway. It had been closed at a later period, and its place supplied by the removal of the back wall of the above-mentioned chamber. Another entrance, which appeared

¹ See Report for 1939 in *Proc. Soc. Ant. Scot.*, vol. lxxv. p. 28.

to have been original, had existed near the centre of the east arc of the circle, where a slot had been formed in the paving as if to form a check for a stone door. Returning to the main doorway, on the left wall on entering, midway between the outer wall-face and the position of the door (Pl. VI, 1), an opening had been made by the removal of several large stones, its secondary character apparent from the chipping observed on the edges of two of the stones remaining *in situ*. When the blocking-stones were removed in order to examine the interior, a slight excavation of the rubble at the back was revealed, but no appearance of any secondary construction. This recess measured 1 foot 10 inches in height, 1 foot 1 inch in breadth, and extended inwards for 3 feet. Its purpose was difficult to determine, as the condition within showed that it was quite unsuited for a dog-kennel, the only obvious explanation.

The purpose of the tower also presented a difficulty, for in view of the situation a watch-tower would have served no practical purpose in the case of an attack on the cattle-folds, considering that the hillside from which the danger would have come rose sharply behind the wags, and even if signalling to the neighbouring brochs was its purpose, no assistance could have been furnished sufficient to disperse a pack of wolves. Evidence of a large wood fire, at a time when peat was used on the domestic hearth, was found in the north-west corner of Wag A. This fire had not been covered by a roof, as if to allow its glare to be reflected in the sky. It has been suggested that cattle would be very reluctant to enter a roofed-in building, with a large open fire ablaze at the inner end of it; but it must be remembered that the cattle of those times did not live under circumstances identical with those of the present day. In many cases they shared the domestic dwelling with their masters, while the fire blazed on an open hearth in the middle of the floor. Such was certainly the case at Jarlshof.¹ In a recess in the circular enclosure of the Wag examined² at Langwell in 1910, similar evidence of fire in the shape of charcoal, etc., suggested the use of that recess as a fireplace or furnace, while a large heap of stones against the outer wall of that building may well have been in some degree analogous to the tower at Forse, for though structureless it was outlined with a kerb of stone and, where facing the interior of the wag, by a line of large flat boulders following the outline of the circle, all suggesting some purpose inconsistent with the idea that it was a mere heap of rubble. With these analogies it seems probable that such was the purpose of the tower, and that of the stair to give access to it. If this is a correct explanation, then the stair for the greater part of its length, also the entrance passage and the recess (Q on plan) opposite the entrance to the stair, were under a roof, so as to give proper access to the fire whether open on the wall-head or in a brazier. It will also explain the end attained by the recess in the doorway, which was

¹ *Proc. Soc. Ant. Scot.*, vol. lxxiii. p. 227.

² *Ibid.*, vol. xlii. pp. 77-80.

to serve as a vent and furnish a draught to the fire, a purpose the possibility of which was demonstrated by a simple experiment with a handful of lighted grass. It will be noted (Pl. VI, 1) that the stones employed to reblock the opening have been placed in such a way as to allow a free draught to circulate around them. A roof extending over the stair and the recess opposite would afford a sufficient space on which to erect the fire, while it would also ensure that the material for it, which might well have been kept in the recess Q, was always dry. A store of tinder was necessary if a fire was to be kept in constant use. The only positive evidence for the height of the wall is to be acquired from arriving at a conclusion as to the length of the stair. To allow for a plat at its termination it might have been double its existing length, which would imply a structure of from 10 to 12 feet in height. This is the actual figure suggested by experts as being necessary to counteract the impetuous rush of a pack of wolves at a wall; and 10 feet was also the greatest height which Dr Anderson found to remain in some part of the walls of the Wag at the broch of Yarrow.¹ The entrance through the turf wall does not appear to have been directly in front of the doorway but at a point some 10 feet to the east of it, and thence passing round the ruined earlier buildings. Though search was made in the vicinity no remains of an outer gate were found. The road appeared to have been bottomed with small boulders. Some 15 feet in front of this break through the turf wall and across the centre of a dry ridge occupying a position between two wettish areas and a possible line of approach, there rises transversely a large triangular slab in rear of which lie a number of flat stones, the whole covering a space measuring some 12 feet by 8 feet, probably placed there as an impediment to the onrush of the wolves. It will be seen on the plan that two ruined hut-circles impinge on the wall and tower to the east of the doorway, also that the wall where it bounds these is slightly thinner than elsewhere, and that no entrance through it is shown into either circle. From these facts it is apparent that the circles are the ruins of huts which were in existence before the wag was built; that on the advent of the wag builders, or previously, they were abandoned and became mere heaps of rubble, sufficiently defensive as to permit a reduction in the width and probably also in the height of the wag-wall on this arc. A partial examination of the floor of one (O on plan) revealed remains of human occupation and small sherds of coarse cooking-pots at varying depths.

Though the secondary occupation of the circle (to be described later) had almost obliterated the features of the primary building, against the western arc the remains of two small intercommunicating huts or chambers remained built against the outer wall and partially ruined by the end wall of the secondary wag. Across the floor of one of them there runs a well-constructed drain.

¹ Anderson, *Scotland in Pagan Times* (The Iron Age), p. 223.

At varying distances outside the primary circle according to the character of the terrain beyond, which rises to the moorland on the western arc and falls to the plain on the east, there had been erected a wall of turf upon a foundation of large discontinuous stones (Pl. VI, 2) over the greater part of its length, with a breadth of from 3 to 4 feet and of indefinite height, but presumably approximating to that of the main wall. Towards the centre of the western arc there lies a large, flat stone approximately some 4 feet square supported by uprights at either end and at the back, so as to leave a recess facing inwards towards the main wall of the wag and measuring in width at entrance 1 foot 9 inches, in depth 1 foot 7 inches and in height 1 foot 4 inches, evidently a dog-kennel (Pl. VII, 1). Towards the south the stone foundation had been abandoned, and a low mound rising from the natural surface showed, when sectioned, the lines caused by the decay of the surface grass on the turf of which it was composed. Eventually in this direction this turf wall ran out on the side of wag A. On the east, on the downward slope, it was merely represented by a discontinuous line of boulders, which appeared to finish just short of dwelling C attached to wag A.

Along a section of the west front between the base of the hillside and the line of the turf wall, where there was a slight natural hollow, a shallow V-shaped ditch had been formed (Pl. VII, 2), varying in distance from the wall as the slope of the hill terminated. Where shown in view the distance between wall and ditch was 6 feet, the width of the ditch 7 feet and its depth merely 1 foot 3 inches. Obviously the purpose of this ditch was to impede the onrush of a pack of wolves and prevent their impetus carrying them up the turf wall in front.

The question arises whether these circular wags were entirely roofed in or not. Very strong evidence against it is provided by the fact of the additional defensive measures considered necessary to prevent the ingress of the wolves, to say nothing of the difficulty of spanning a circle of 45 feet. Moreover, one of the main advantages to the oblong form of wag, as illustrated by A on the plan, was the facility with which it could be roofed over, besides the greater economy of space. The occurrence of numerous blocks of stone from 2 to 3 feet in length and 4 to 5 inches square in section, found on the floor of wag A towards the centre, was probably connected with the system of roofing. How light was admitted into the interior so as to allow the tethering of the cattle is not known. That there appears to be a complete absence of external defences around those of the latter form is perhaps even more conclusive evidence of their having been roofed.

Partially set against the southern arc of the circle and founded at a lower level, there is a segment of walling with a doorway at its eastern extremity having both portals *in situ* (Pl. VIII, 1). It will be observed that the floor is paved, not in the manner practised in the wag itself with

large continuous flags, but with small irregularly shaped pieces of flat stone. While the western section of this wall is constructed with similar material and in a like manner to the main outer wall of the wag, the eastern section is built with much lighter stone and with poorer construction (Pl. VIII, 2). It is also noticeable that whereas the foundation-stones of the former section do not rest upon the actual paved floor, those of the latter do, especially recognisable at the doorway. Coupled with this is the fact that on the paving there were found numerous pieces of slag and a few sherds of coarse pottery. It seems evident, therefore, that here are the remains probably of a dwelling of the pre-wag period, which it was intended to adapt to later requirements. The fact that the paving lies directly on the rock further indicates its primary character. That the wall, which separates sections F and E, is a single line of large stones suggests that the area had never been actually completed in the wag occupation, and that F, probably filled with debris, would account for the doorway remaining in its original state.

Though the circular wag was not the primary structure on the site, as is borne out by the remains of the two circular huts against its outer wall to the east of the entrance, and by the finding of odd fragments of pottery at one or two places within the wag at lower levels than its floor, it was probably the first building of its class to be created there.

It is noteworthy that the circular form of wag is to be found for the most part in use in the more inaccessible regions, on the lower slopes of Morven and in Berriedale, while the oblong plan has been chiefly confined to the strath of Dunbeath. An inference to be drawn from this fact is that the stock for the most part taken to the shielings (as in later times) would be cows or cattle generally. The circular wags in the first instance were employed for the protection of such stock in the hill country. In course of time to provide increased accommodation, and at the same time as occupying a smaller area and requiring less construction, the oblong wag was probably introduced. Accordingly with these ends in view two oblong wags were erected within and extending over the eastern arc of the Forse circle, separated by a broad bank composed of earth and stone, between outer walls of stone. Though in external aspect this bank appears to be uniform throughout, it is in fact composed of two separate sections 5 feet and 3 feet wide respectively, with a common wall between them. It may have been that the wag (L on plan), being presumably for cattle, required a higher and stronger wall to carry the heavy lintels for the roofing of the surrounding galleries, while a lower wall and lighter roofing would be sufficient to shelter and protect the lesser animals of the farm stock. On the other hand, the broad bank, which forms the southwest arc of the circle, appears to be of uniform construction throughout, as if to correspond to the tower on the opposite arc and conceivably used for the same purpose.

At the inner or west end of the division between the two oblong wags there has been a considerable amount of reconstruction, or it may be merely the utilization of material from pre-existing early building on the site in which boulders and poorer stone were used. If this is so, it does not, however, explain how the two chambers at the west end, constructed in the primary manner, have been completely isolated, with access closed by the intermediate walls. The entrance into the wag N through the original surrounding wall was comparatively narrow, measuring apparently only some 2 feet or thereby, indicating that it had been intended for lesser stock such as goats, sheep, or swine, while that into its neighbour (L on plan) was of the usual width giving entrance to cattle, 3 feet 6 inches. A single passage furnished with cheeks for two doors, after passing through the turf wall and bifurcating, gave access to both wags.

The length of the outer passages into these wags indicates that there must have been originally considerably more building on this east side between the wags and the turf wall, but as the rough pasturage in front of them had at one time been much under occupation and cultivation, creating a demand for stones for the building of huts and for the boundaries of fields, these had been freely removed. When the change in the character of the wag buildings occurred, the access into the centre of the circle through the inner wall of the tower, directly opposite the gateway 3 feet 6 inches wide, was built up, and at the same time, as previously mentioned, a substitute entrance was provided by lowering to its foundation the wall at the back of the adjacent recess. If the use of this recess was, as suggested, the storing of material for the fire, then this alteration may signify the abandonment of the fire. Such a change may also explain the closing of the vent in the doorway.

Among the ruins, which filled the interior of wag N, no remains of subdivisions were observed, but some such arrangement is obviously implied by the two entrances provided. At several places, as in the hut O against the outer circumference of the circle, in the floor of the cattle-herds' cabin (K), and just inside the main gateway into the circle, where the floor of the wag occupation was broken through, evidence was forthcoming of an earlier occupation, which probably extended over a great part of the site.

The relics found throughout were remarkably few, and the only group came from the interior of the sub-secondary dwelling C connected with wag A, and, as described in detail in the previous report, they consisted of a polished sandstone disc from what appeared to have been a secondary floor-level; a rim section of a small vessel of black pottery and of globular form, having an everted rim, from the same level; an unfinished stone whorl; four segments forming in all a rudely fashioned ring of cannel coal; the rim of a cooking-pot with a series of finger-tip impressions immediately

beneath the rim; the remains of another cooking-pot (Pl. IX, 1) found on the peat fire where it had been crushed by the fall of the roof; numerous cooking-stones or pot-boilers and four complete stone pot-lids with the half of another. Two imperfect saddle querns were also found being used as paving-stones. From this year's excavations the relics found were fewer, the explorations having been almost entirely confined to wags or cattle-courts. They consisted of the remains of three saddle querns, a round pebble of quartz, part of another of similar material, a heavy pebble of fine-grained sandstone, and part of another, all of which have been used as hammer-stones, one of them being found in the bar-hole of the doorway into wag E. A segment of a ring or bracelet of cannel coal was found in the herd's chamber to wag L. While opening out the doorway leading into the circular wag, at a depth of a few inches below the entrance level, there were found three human bones, two of which had been adapted for use as artifacts: (1) a femur head perforated for use as a whorl; (2) the proximal part of the shaft of a right femur, which had been used as a peg, or shaft for some weapon or implement, and of which the posterior aspect shows marked platycnemias; and (3) a humerus from the right side, small and slender but adult. All the bones might have belonged to the same individual.

THE RELATION OF WAGS TO BROCHS.

What, if any, is the relation of these wags to the brochs? This question may be considered under three heads: Structural, Cultural, and Economic.

(1) Structurally the resemblance is striking. There is the same massive building; the same compact and regular placing of the stones, which suggests coursing. In both cases the material used is remarkably regular in form, and occasionally stones of unusual weight are employed (Pl. IX, 2). Similarly there is no regular bonding, and the interior of the wall is rubble. The walls are carefully erected on a broad foundation with a projecting scarcement; while lastly a stair in the thickness of the wall is a feature of every broch and is found in the Forse wag.

(2) Culturally. The relics found in the group of buildings at Forse are few in number, and the majority of them came from the circular dwelling C, itself a secondary addition to the oblong wag A. It is not an impressive list, but it contains nothing which might not have been found in a broch! Querns, rubbers, rudely fashioned segments of rings of cannel coal, pot-lids, cooking- or boiling-stones, rudely fashioned pottery. Only the querns call for comment. Of these both varieties were found, saddle and rotary, but whereas the former were represented by some four examples, only broken portions of one rotary quern were found! Moreover, as stressing the evidence for the greater use of the saddle variety, it is worth mentioning that five round pebbles, in whole or in part, with faceted surfaces possibly

produced by rubbing on the querns, were also found, thus indicating a considerably greater employment of the more primitive saddle quern than of the later rotary variety. In those brochs which have been excavated, both kinds of querns have been found, but unfortunately definite statements as to their relative numbers have usually been omitted. From the broch of Ousedale, however, in Latheron parish, the finding of rotary querns only is recorded. In cattle-courts and sheep-pens one would not expect to find relics of human occupation, and except from the dwelling C most of the remains have come from the neighbourhood of the entrances and herdsman's cells.

(3) The Economic relation is even more obvious. We know from ample evidence that the broch owners were pastoral and agricultural people. They had horses, cattle, sheep, goats, and pigs, and they grew grain, bere and oats, the latter recorded as having been found in the broch of Dunbeath in Latheron parish. As bones from kitchen-middens have supplied ample evidence of the farm stock, so the occasional recovery of burnt grain and the numerous finds of querns testify to the growing of grain. While space no doubt could have been found for the grain, occasionally, within a broch, accommodation for the farm stock would be out of the question. Therefore around a number of brochs there have been found clusters of outbuildings, which no doubt, under ordinary conditions, served such a purpose. When, however, the broch owner was faced with extraordinary conditions, such as prevailed on the outskirts of the hill country in Southern Caithness, within range of the packs of ravenous wolves rushing down to the plains in hard weather, then other means had to be adopted of a more comprehensive character. Under such a stimulus the original circular wag of Forse was no doubt constructed, on a slight elevation at the edge of an area of pasture-land just where the moorland falls to meet the plain. There is ample water in the immediate vicinity, and stone nearby to provide perfect building material. The stock of sheep and cattle that to-day browse on the green turf and short heather in the neighbourhood demonstrate the high quality of the pasture. Here within a quarter of a mile a broch occupies a rocky hillock, and at about the same distance farther away a grassy mound shows the remains of another. The menace must have been serious indeed that required the erection of a veritable fortress, with its enclosing stone wall sufficiently high to prevent the onrush of the wolf pack. The circular wag evidently fully serving its purpose may have lasted over a long period, but in course of time the type had developed elsewhere, and there came a call for increased accommodation. So the new plan was adopted, the oblong wag.

Such being the peril and such the means to counteract it, it seems fairly obvious that no broch proprietor living on the border-land, where high land and low land meet, could afford to live without some such construction

to protect his stock. Hence we see in this district the remains of wags, in the adjacent straths of Dunbeath and Berriedale, and to a less extent in Langwell where pasture conditions may not have been so suitable. No estimate has ever been attempted of the duration of life and occupancy of a broch, nor has anyone any idea when the first broch and when the last were constructed, so little modification occurs in their plans and method of construction; and as wags were built to last, there is not the slightest difficulty in synchronising them with the brochs, even though the evidence tends to indicate that the wag was an early adjunct of the broch in the regions where it is found.

Previous to the present research and the examination of the wag of Landwell which I made in 1910, the only examination of a wag was that done, incidentally, by Dr Joseph Anderson in 1866-67, outside the broch of Yarrows, the details and arrangement of which were described in my previous communication. It was of the later or oblong type and seemingly a highly developed example.

On looking at Dr Anderson's plan, it will be observed that there is a broad ditch, isolating the broch and its associated buildings at the end of the peninsula on which they stand, and the deep curve made by the ditch seems to indicate a purpose to enclose some structure between it and the broch. The considerable depth of stones overlying the original soil and intermingled with ashes and food refuse, which Dr Anderson found, and considered as evidence of the post-broch erection of the wag, may have been in part the ruins of the roofing of the existing wag or of a previous cattle-shelter of an earlier type. In any case the evidence is not sufficient to prove that all wags are, by reason of these finds, of a class of structure belonging to a post-broch era.

As for further evidence of the relation of wags to brochs, it is to be found in the distribution of numerous examples of both structures throughout a considerable portion of the parish of Latheron. A great part of this parish to the west, along the border of Sutherland and towards the north in the high hill country by Morven and Braemore, consists of moorland and mountain of little value to farmer or grazier. It is, and always has been, the haunt of the red deer and of such other creatures of the wild, predatory and otherwise, as belonged to any given period. In contrast, the fringe of the coast north of the Berriedale Gap, and inland along the straths of Langwell, Berriedale, and Dunbeath towards the lower slopes of the mountain, have from early times to the present day been cultivated or pastured. Scattered throughout this area, especially in the coastland region, there are no less than thirty-four brochs, a larger number than in any other parish in the county, possibly concentrated there by reason of the security afforded by a rocky coast line, extending from the Sutherland county boundary at Helmsdale almost as far as Wick, without affording

any beach on which a sea raider could land and draw up his boat. To landward the wags occur along the straths from what must have been the limit of range of the wolf packs, continuing into the hills till they reached the lower slopes of Morven, some 800 feet above sea-level. While some of them may be situated where pasturage and land cultivation were practised, the greater number are in situations where the feeding of cattle throughout a considerable part of the year would have been an impossibility. Therefore they must be regarded as having served a seasonal purpose, belonging in fact to summer shielings. A few of the wags, such as those at Langwell and Forse, are situated comparatively near brochs, while those in remote regions may presumably be connected with other brochs, the owners of which, to relieve their home pastures, sent their cattle to the hills in summer.

The construction of a wag must have entailed some considerable command of labour with which to procure and assemble the material, and of masons to effect the construction. One can hardly suppose that such massive and skilfully erected structures were the work of mere cattle-herds. So close to the source of danger as some of these outlying wags must have been, it is reasonable to suppose that their construction must have been completed before the cattle were brought to occupy them. Moreover, the erection of such massive buildings, of an obviously permanent character, seems to indicate some permanent right of possession to land and grazing in their vicinity, and, for a similar reason, to the land in the neighbourhood of the brochs.

The foregoing considerations bring into view the broch owner as a man of property, with considerable wealth in the form of flocks and herds, able to command the services of craftsmen skilled in masonry and not unacquainted with practices followed at the present day. He could also control labour, slave or free, such as was required, to remove from the quarry and to accumulate the not inconsiderable mass of material, much of it of great weight, needed for the construction of these buildings.

Did the broch owner occupy the broch as his permanent home or was it, as has been questioned, merely an impregnable tower to which he could resort with his family on the threat of danger? Though certain brochs have produced few relics, so few in number as to give weight to the idea that the broch was not in permanent occupation, on the other hand the quantities of potsherds, etc. recovered from some of the Caithness brochs point to a different conclusion.

Against the theory of occasional occupancy must be stated the fact that up to date no remains of any substitute dwelling have so far been found. There is, perhaps, something in regard to this question to be learned from the wags and brochs of Latheron. The brochs appear, as far as it is possible to form an opinion from the few excavated or partially exposed examples, all to be typical structures of the completely impregnable character, such

as are found wherever the broch exists. It is in fact the typical residence, not altered by the regional circumstances, nor by the character of the site on which it is built. In Latheron we have seen that the brochs behind an unassailable coast-line rested in security from any seaborne enemy attack, and presumably for the same reason the wags are concerned solely with defence against the attacks of beasts of prey and not against those of man.

Finally the wag is but the adaptation of the available means towards the end desired. Evidently, then as now, Caithness was not a timber-growing region, in which suitable stakes could have been readily procured wherewith to form stockades, the customary method of affording protection from wild beasts among primitive peoples. Suitable building-stone was, however, abundant, and so the men of the brochs, skilful architects and builders, devised and constructed the wags.

My thanks are due to the proprietor, Dr Sinclair, for allowing the excavation to proceed. I must also acknowledge with gratitude the financial assistance received from the Society, who paid for the labour and for my daily motor hire, without which I would not have been in a position to conduct the excavation. I am also much indebted to Mrs Peter Murray Threipland, who very kindly, with the assistance of her husband, produced the excellent plan, and to Mr Calder for preparing it for publication. Lastly I would thank Miss Platt of the Royal Scottish Museum for having furnished me with a report on the three human bones. I was fortunate in again having the services of our Corresponding Member, Mr Simon Bremner, to act as foreman, and of an excellent staff of local labourers.

III.

A MISCELLANY OF ANTIQUITIES IN EASTER ROSS AND SUTHERLAND. BY J. M. DAVIDSON, O.B.E., F.S.A., F.S.A.Scot.

Read April 14, 1947.

Tumulus at Cadbollmount.

On the eastern seaboard of Easter Ross, in the parish of Fearn, and on the estate of Geanies, stands a tumulus known as Cadbollmount. It is situated on the crest of an elevation just above the 250-foot contour line, some 700 yards from the north-western coast-line of the Moray Firth. To the north-east it is protected by an adjoining skirting of woodland, running at right angles to the coast. It commands an expansive prospect of the

Kyle of Sutherland with its mountain background, as well as the seaboard areas of the Cromarty Firth and Morayshire (Pl. X, 1).

The tumulus is a truncated cone about 95 feet in diameter at the base, with a flattish top 10 feet in diameter. Its height is 20 feet. From breaks in the surface caused by rabbit burrowings it appears to be built of earth and clay mixed with stones.

Cemetery at Balintore.

During 1937 when a mound of sand at Balintore, Easter Ross, was being levelled for the foundations of a new housing scheme, a cemetery was discovered, a number of human bones being unearthed.

The housing scheme is an extension to the south-west of the street forming the main road from Hilton to Balintore, and is within a stone's-throw of the sea. The ground on which it is situated has had a sinister reputation for ghosts, the local name for the locality being Ghost's Hillock long before the recent burials were found. This fact stimulated the concealment of the discoveries due to fears that the linking of the association of ghosts and burials would affect detrimentally the letting of the houses. Publicity was accordingly discouraged: the foundation work was carried on without the interruption of investigators, and no attempt was apparently made to place on record the nature or the circumstances of the finds.

Two skulls and a complete human skeleton were the first relics to be found in the sand. The skeleton was surrounded by stone slabs, and some flints or sharp stones were found in association with it. The skulls were found at the same place, but there was no sign of a stone tomb near them.

More recently burials have been found in some of the back gardens nearby. These were in short cists.

Dr J. J. Galbraith, at that time Medical Officer of Health for Ross and Cromarty, who examined some of the human remains, was of the opinion that the cemetery was a very large one. He did not see any of the later cists, but he thought they were similar to those previously found. "The curious thing," he says, "about the Balintore place is the superstition clinging to the site long before the finds were made, and which must go back a long time as no one living had any idea that it was a burial-place."

Mr Gordon Crawford, Schoolmaster at Fearn, has informed me that a generation ago people used to be frightened of the place and of a little hollow nearby, both of which places they tried to avoid. If, however, on going to bathe they chanced to go near, they threw into the hollow a small stone to ward off any evil.

From the slight evidence here brought together the discoveries might be related to the Bronze Age.

Instances of the tenacity with which superstitions cling to a site and

which have subsequently been proved to have been founded on fact are recorded from two English counties. The Lexden barrow, west of Colchester, Essex, harboured a belief that it was the burial-place of a king in golden armour with weapons and a gold table. Excavation in 1924 revealed a bronze table and ornaments of bronze and gold, with a skeleton clad in chain-mail and wrapped in tunic of a cloth of gold.¹

From Mold, in Flintshire, comes a similar tale of a woman who was passing a barrow and saw on it a man on horseback, the horse being clad in golden armour. A short time afterwards the barrow was opened and found to contain a gold peytrel or horse's breastplate which is now in the British Museum.²

Chapels.

On the Tarbat Ness peninsula are a number of sites of chapels, testifying to the existence of Early Christian settlements, some of them associated with the name of Saint Colman or Colmag.

(a) At Portmahomack, *Port-ma-Cholmaig*—Port of Saint Colmag—the site of a chapel is marked on the high ground at Chapel Street by a rough flooring of flat stones in a roughly oblong setting, approximately east and west. A hundred yards away is St. Colman's Well, which is said to have been in continuous use for hundreds of years and from which water is still being drawn daily.

(b) At Balnabruaich, *Bal-na-Bruach*—the village on the bank—a continuation of the village of Portmahomack, lies another chapel site some 50 yards inland on the shore-level from the village street. No remains are now discernible.

(c) At Ballone, on the opposite side of the peninsula, in the shadow of Ballone Castle, but on the shore-level, $\frac{1}{3}$ mile north-east of the village of Rockfield, are the rather indefinite remains of a chapel.

(d) At Cadbollmount, St Mary's Chapel is situated within a clump of trees about 50 yards west of Cadbollmount farm-steading. The site has been utilised as a dump for farm debris and no trace of the chapel site can now be seen.

(e) At Cadboll, on the shore-level, in rush-covered, swampy ground, is a well-defined rectangular earthwork about 84 feet by 60 feet. Within this enclosure traces of a chapel structure are clearly visible in the form of a small rectangular walled building measuring about 37 feet by 22 feet. The direction is due east-west, some 30° athwart its surrounding earthwork.

From this site the Cadboll Sculptured Stone was removed by the proprietor to the British Museum and thence to the National Museum of Antiquities, Edinburgh.

¹ L. V. Grinsell, *The Ancient Burial Mounds of England*, p. 50.

² A. H. Verrill, *Secret Treasure*, 1931, p. 27.

Castles.

Numerous castle sites are recorded of which little trace can now be discerned.

(a) Geanies. This was quite unknown locally. The position is marked on the O.S. map as in a large field about 500 yards east of Mains of Geanies Farm. The site was under wheat, and no trace whatever was distinguishable.

(b) Castle Corbet was also quite unknown to the farmer on whose land it was situated.

(c) On an elevation on the edge of the 50-foot raised beach and at the mouth of a dry gully—Allt' o' Cháoling—are the remains of a structure, roughly circular, about 30 feet in diameter. The walling is of stone, standing some 18 to 30 inches high. A break in the walling, suggestive of a doorway, faces N.N.E.

(d) About 20 feet north-east, on a projecting spur of the beach, are the remains of a smaller circle some 28 feet in diameter and lying about 4 feet lower than the other. The walls in this case appear to be of earth and sand, with a doorway facing in the same direction.

The situation of the two circles is fine, overlooking the Kyle of Sutherland and Loch Fleet.

Sculptured Grave Slab.

There is a tradition in the Tarbat Ness district that some hundreds of years ago some bodies were washed up on the eastern shore of the peninsula from a shipwreck. Owing to the impossibility of determining the religious beliefs of the unfortunate drowned men, it is said that none of the local clergy would undertake their Christian burial and they were interred in a common grave on the shore-land near Ballone.

A large, weather-beaten stone slab was located on the seashore about 500 yards north-east of Rockfield. After clearing it of its encrusted fungi, the rude figures of an anchor, a windlass, and a bone, together with some groups of initials and the date 22nd March 1682, were revealed inscribed upon it (fig. 1).

The slab, which was 5 inches thick, was lying horizontally with the sculptured side up. It was of red sandstone. It measured 5 feet 2 inches long, and the width was slightly tapered from 2 feet 6 inches at the one end to 2 feet 2 inches at the other.

The stone was neatly dressed and trimmed, and the sculptor had carefully cut out a panel $3\frac{1}{2}$ inches wide all round the stone inset $1\frac{1}{4}$ inch from the edge. He began his lettering at the top left corner and continued across the top and down the right panels of the stone, where his inscription terminated with the date, leaving the bottom and left panels blank. The lettering was neatly and uniformly done in Roman capitals, but apparently he had

misspelled the word March by omitting the letter "R," but he corrected the error by wedging into the cramped space a badly formed Arabic "r."

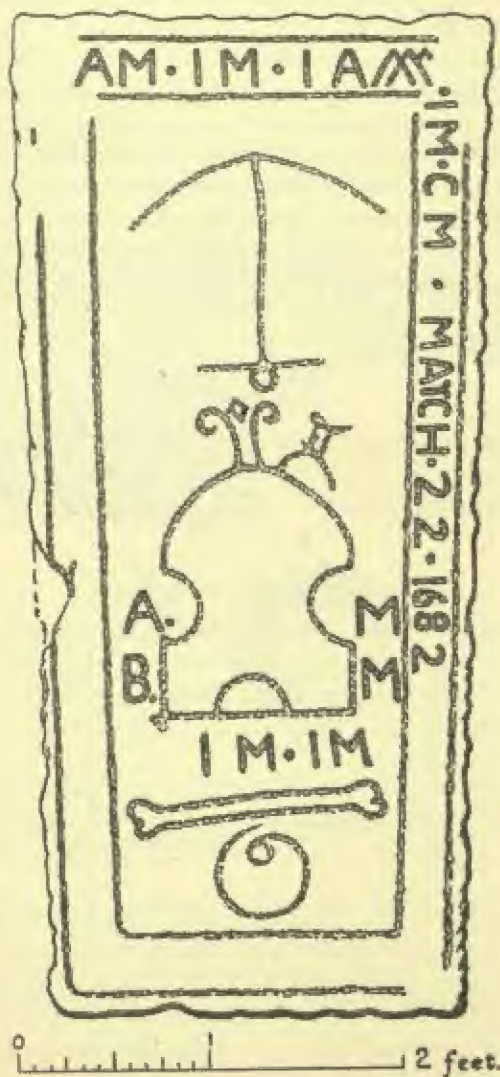


Fig. 1. Grave slab at Ballone, Easter Ross.

The main central panel was poorly executed. The arms of the anchor are flattish and unreal; the scroll above the windlass appears meaningless and the lettering is ill-balanced and crude.

The proximity to the sea and enveloping sands have dealt unkindly with

the grave itself. The wind has blown the sand from below the tombstone, leaving the latter to rock when balanced on the underlying stones, while there have come to the surface of the rock-filled grave some of the bleached bones of those interred.

The maritime emblems and the absence of Christian symbols make it appear not improbable that this is the sailors' grave referred to. Some kindly disposed person evidently had seen to it that their last resting-place was not left unmarked. How, in the absence of information regarding the religious tenets of the drowned men, their initials were ascertained must remain a matter of conjecture, although the prevalence of the surname initial "M" might indicate that the boat's crew were largely members of the same family. Perhaps a ship's log may have survived to provide some evidence of the names of the crew.

Saddle-Quern.

Built into the lower part of the north-west stone gate-post of the Portmahomack parish churchyard, abutting the Tarbet Ness road, is a saddle-quern with its concave face protruding.

Chambered Cairn, Kinrive.

To the Inventory of Cairns and Chambers, Easter Ross,¹ there might be added a further note regarding the Chambered Cairn, No. 8, Kinrive. This is known locally as "The King's Head Cairn," which has given its name to the hill on which the three cairns noted are situated, Kinrive (Gael. *Canna-na-Rìgh*)—the head of the King.

The cairn is completely demolished, the outer perimeter alone being now discernible by a ring of stones overgrown by grass and bracken. All portable stones have been removed, the site of the cairn being left somewhat saucer-shaped.

The central chambers have in some measure resisted the wreckers, some few uprights being still standing while others are prostrate. Two uprights are particularly massive, one to the west standing 7 feet high, 4 feet 6 inches wide, and 2 feet thick, the other to the south being 6 feet 6 inches high, 6 feet wide, and 18 inches thick. A large displaced capstone measuring 7 feet by 4 feet by 2 feet is still supported by fallen stones. The tangle of wreckage is so confused that it is difficult to determine the general framework. A small outlying cist 4 feet 4 inches by 3 feet 6 inches is probably the most recognisable feature. The chambered remains are crowned by a large and gnarled birch tree, the roots of which envelop the superstructure.

The demolition appears to be less recently done than the thirty years

¹ *Proc. Soc. Ant. Scot.*, vol. lxxviii. (1943-4), p. 31.

stated. The period of sixty years was mentioned locally, and from the tree growth surmounting the remains this might even be an underestimate. A human skull was said to have been found during the destruction of the cairn. This skull is now said locally to have been "the head of the King."

Stone Hatchet from Balvraid, Skelbo, Sutherland.

Some years ago a stone hatchet was found in the burn flowing through the Balvraid Wood, about one mile from its mouth near Skelbo Castle.

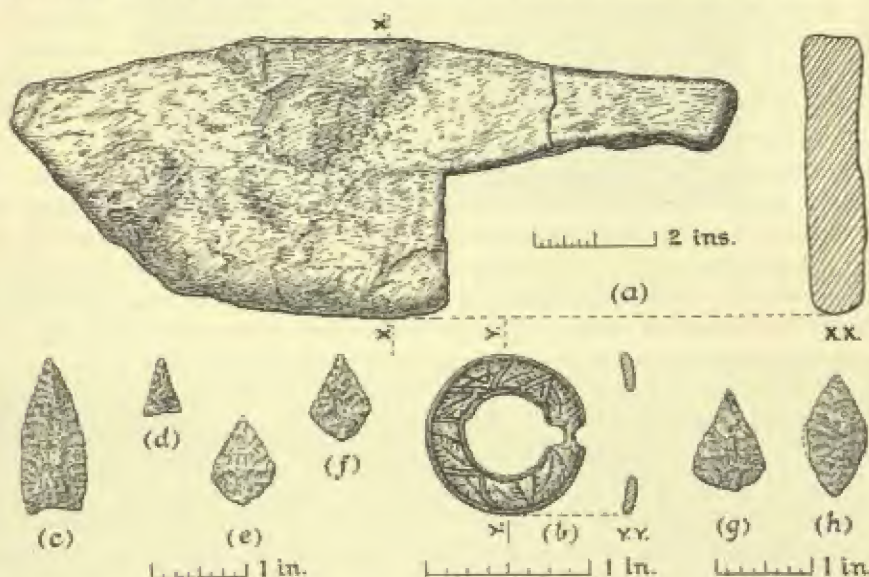


Fig. 2. (a) Stone hatchet from Balvraid; (b) Bronze brooch from Cuthill Links, Dornoch; (c) to (f) Arrow-heads from Golspie Links; (g) and (h) Arrow-heads from Cuthill Links.

The tool (fig. 2a) is neatly cut out of a flat block of hard grey millstone grit, and is 12 inches long, including the handle. The blade is $7\frac{1}{2}$ inches long and $4\frac{1}{2}$ inches wide, the thickness being uniformly about $\frac{3}{4}$ inch. The weight is $2\frac{1}{2}$ lb. The butt edge is square and the utility edge rounded and abraded.

A polished stone axe was found at the same time and in the same place, but it was thrown back into the burn and has not since been recovered.

Prehistoric Sites near Dornoch, Sutherland.

On the Cuthill Links, some three miles west of Dornoch, through which the road to Ferrytown passes, are some sites of prehistoric interest. There

are evidences of some stone industries involving the use of flint as well as a number of native rocks: a shell midden of considerable size has furnished not only a great variety of shells and some bone refuse but also a large number of stone-flaked artifacts.

The links consist of sand-dunes piled up on the 25-foot beach, these being interspersed with wind-blown areas of gravel. On these latter patches many finds have been made. No stratigraphical evidence has been obtained, as all of them have been picked up from the surface. Among the more noteworthy of the objects found are:

(1) A small circular brooch of bronze (fig. 2*b*) measuring 1 inch outside and $\frac{3}{4}$ inch inside diameter. The circularity is broken both outside and inside by a recess for a looped pin. The metal is very thin, but the strength of the brooch has been greatly increased by a slight convexity on its decorated side. The reverse—concave—side is quite plain.

The decoration is a simple leaf motif repeated all over the surface. It is vigorously executed—the central stem of the leaf and the slanting veins being represented by bold cuts as though they had been impressed by a sharp, chisel-edged tool. A minute examination, however, reveals that the markings are not tooled or stamped but that the brooch was moulded and cast in its ornamented form. This is borne out by the fact that the plain, reverse side bears no evidence of chisel application, as would have been the case had each mark been impressed by a blow. The hinge for the pin is slightly rounded through wear. The pin itself was not found.

In the Dunrobin Museum, Golspie, are two bronze brooches of similar type, both found in Sutherland. One of about the same size, with indistinct markings, was found in 1879, while the other, found four years earlier in Lairg, is about $2\frac{1}{2}$ inches in diameter, and has as its decoration a leaf pattern similar to the one described above.

(2) Arrow-head (fig. 2*g*) of amber-coloured flint delicately tipped at the point with "Buchan red."

(3) Lozenge-shaped arrow-head (fig. 2*h*) of mottled brown flint. One point was broken.

Arrow-heads from Golspie Links.

Golspie Links, from about two miles south of Golspie village to Littleferry, have long been recognised as an area prolific in prehistoric finds. Great numbers of arrow-heads and implements of flint have been found there over many years. A search for a prehistoric workshop floor was not successful, but the undernoted were brought to light:

(1) Arrow-head (fig. 2*c*) of clear quartz $1\frac{1}{2}$ inch long by $\frac{3}{4}$ inch wide. It is slightly convex on one side and somewhat unevenly flat on the reverse.



1. Tumulus at Cadbollmount, Easter Ross.

J. M. DAVIDSON.

ANTIQUITIES IN EASTER ROSS AND SUTHERLAND.



2. The Abbot's Cross, Lintathen, Angus.

W. FENTON.

THE ABBOT'S CROSS.

[To face p. 32.



- (2) Broken point of arrow-head (fig. 2*d*) of grey flint.
- (3) Arrow-head of white quartzite (fig. 2*e*).
- (4) Arrow-head of grey quartz (fig. 2*f*).

Cairn, Allt a' Mhuilinn, Brora.

In the Royal Commission's Second Report¹ this cairn is noted as having been excavated, two large displaced stones which may have been part of a chamber being exposed.

The cairn had been almost completely destroyed in recent years to provide stone for the construction of a water-supply dam before the factor to the Ascoile Estate prohibited the removal of further materials. The remains of two chambers only survive: one to the north, being 5 feet long, has two large flat stones upstanding, while the other chamber to the south has one upright standing and one prostrate.

In the immediate neighbourhood are numbers of the heather-clad tumuli which are so common a feature of the Sutherland moorlands.

Stone Circle, Ascoile.

About 200 yards from the east side of the road on the left bank of the Allt a' Mhuilinnburn, some 500 yards north-east of Ascoile, is a stone circle about 30 feet in diameter.

The situation overlooking the Strath of Brora from the north is striking, the elevation being on the 400-foot contour line. The stones are set on end and practically all are visible, none projecting above the ground more than about 2 feet.

Cairn, Greeanan.

On the north side of the Strathbrora highway and immediately adjacent thereto, about 500 yards east of the Ascoile Bridge, is a cairn about 35 feet in diameter. On the western perimeter is a ditch 5 feet wide and 3 feet deep. The cairn has been tampered with, there being evidences of two excavations, presumably to locate cists, but these latter are not visible.

Earthwork, Greeanan.

On the south side of the roadway one mile west of Allt Smeòrail burn are the remains of a circular earthwork. Rather less than half of this has been destroyed by the intersection of the road. The earthwork consists of a mound 27 feet diameter, surrounded by a ditch 6 feet wide. The upcast of the ditch has been heaped on the outer perimeter. In the centre are some large stones suggestive of the interior of a cairn, and large stones remain on the outer rampart and in the ditch.

¹ *Inventory of Monuments in Sutherland*, No. 43.

IV.

THE ABBOT'S CROSS. By WILLIAM FENTON, F.S.A.Scot.

Read February 11, 1946.

Among the many estates owned by the ancient Abbey of Aberbrothock, not the least important was the entire parish (then called a "Schyra") of Kingoldrum, in Angus, granted by the founder of the Abbey, King William the Lion, somewhere about A.D. 1178.

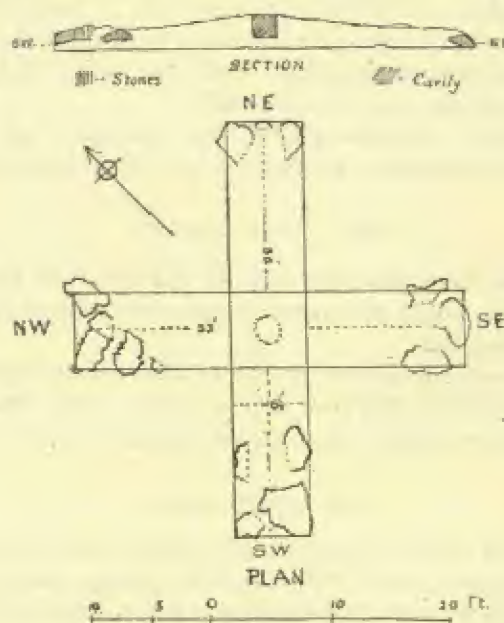


Fig. 1. The Abbot's Cross, Lintrathen, Angus.

The records of the Abbey show that disputes regarding boundaries of church lands were not infrequent, and they also show that the monks prudently marked the boundaries of their lands with cross-stones ("corsstanes" as they are called in the documents).

The Cross which is dealt with in this communication is much more than a "corsstane"—it is a collection of boulders, arranged in two arms or ridges, which intersect one another at right angles (fig. 1), each arm being about $6\frac{1}{2}$ feet in width, one arm 36 feet long and the other 34 feet long.

The stones were piled to form ridges varying from 2 to $2\frac{1}{2}$ feet above ground-level, and most of them are now overgrown with grass and heather,

but at the outward ends of the arms the largest boulders are placed, and these still stand out bare, as shown by photograph (Pl. X, 2).

In the centre, where the arms intersect, is a cavity about 1 foot deep and 2 feet in diameter, which was probably occupied originally by an upright stone, now removed. In the cavity are several small stones, lying loose, which were doubtless used as packing for the upright stone.

The Cross lies, not on the top of the hill, but about 400 yards south-west from the top. The hill is now known as Strone Hill (1074 feet) on the map, and is called locally Foldend Hill from the farm to which it is attached.

I understand that there is a similar cross, known as the Bishop's Cross, marking the boundary of church lands near Aberdeen, and that another one is described in the *Inventory of Ancient Monuments for Dumfriesshire*.¹

One would naturally suppose that the present boundary between the two parishes would still be defined by the Cross, but it happens that the existing boundary runs north and south at a distance of over half a mile to the east. Therefore it was necessary to have recourse to ancient documents in search of proof as to the line of the original boundary.

In the *Registrum Velus de Aberbrothoc* there are three documents dealing with this question.

The first, on pp. 226-27, is dated A.D. 1253, and is concerned with a dispute between Sir Thomas de Rettre and the Abbot regarding the northern part of the boundary between Kingoldrum and Lintrathen. It is very interesting, as it contains a narrative of the perambulation of the marches, but since it does not refer to the region of the Cross we do not require to notice it further.

The second document, dated 1256, is a quit-claim by Alan Durward, Justiciar of Scotland, in which he states the boundaries between his lands of Lintrathen and those of the Abbot. In the southern part of the parish the boundaries are indicated with some particularity, but when he ascends to the moors he is very indefinite, and the frontier as stated by him might be taken to run pretty much on the lines of the present parish boundary.

The third document (in the *Registrum Nigrum*) is dated 1458, is in the vernacular, and is much more detailed than the other two. It begins at the southern part of Lintrathen and proceeds northwards. The following quotation relates to the region of the Cross: "and swa up to the burne of Athyneroith that is to say the Gallaow Burne the quhilk diuides Kynclwne and Pergewy · and swa up to the Raistane Well diwidand betuix Kynclwne and Pergewy · and syne northwest to Tybyrnoquhig that is to say the Blynd Well · and swa up to Carnafotyrr that is to say the Pwndiris Carne · syne eist to the corsstane abwne Cargsuryngeis."

Every one of these old names, except Kynclwne, Pergewy, and Tybyrno-

¹ No. 504. For other examples, see also *Proc. Soc. Ant. Scot.*, vol. xxxiii. pp. 345 ff., vol. ix. pp. 209 ff., and J. R. Mortimer's *Forty Years' Researches*, pp. 388 ff.

quhig, is now entirely forgotten, but the Gallow Burn, which marks the present boundary, is identifiable, because it is the only one in the neighbourhood. Proceeding up this burn, therefore, one reaches the limits of cultivated land, and there is an earthfast boulder with a rushy hollow beside it which is probably the Raistane Well. From that point one turns north-west (quite off the present boundary) and reaches Tybyrnoquhig (now called Tipperwhig), where there are the remains of a crofter's house and steading. It seems a fair inference that the words "and swa" mean that the line continues in the same direction as from Raistane Well to Tybyrnoquhig, and we set our course accordingly north-west by compass. This led over a ridge on Brankam Hill, and when we reached the top our line of march pointed direct to the site of the Cross. Accordingly, if this is accepted as sufficient evidence, the Cross must be regarded as the boundary of the Abbey lands. It is certain that on the line taken from Tipperwhig there is nothing which could be called a "Carn" until the supposed Carnofotyr is reached.

The question arises, Why is this Cross not mentioned in the elaborate list of landmarks contained in the document of 1458, in which no fewer than four corstanes are stated? These corstanes (cross-stones) were probably the usual earth-bound boulders, marked with a small incised cross, and would be much less noticeable than the large cross. The probability is that during the time which had elapsed between its construction, possibly about the end of the twelfth century, and the statement of boundaries in the middle of the fifteenth century it had been forgotten. Still the line laid down by the Abbot in 1458 leads directly to the Cross, and if Carnofotyr is really the eastern top of what is now known as the Foldend Hill, then it is certain that the Cross was put there by the Abbot of Arbroath to mark the turning-point of his boundary, which from the top of the hill runs east as stated in the document, and joins up quite naturally with the present line of boundary.

The alternative name for the hill Carnofotyr, that is to say the "*puendiris Carn*," is not a translation of Carnofotyr, but is probably a local name, derived from the carn having been the station of a Pundar, an official employed by many ecclesiastical landowners to look after boundaries, etc., and to "pund" or pound stray animals. There is an ancient turf-walled enclosure on the nearest level ground to the Cross, which might have been the pound, and there are foundations of a house with outbuildings on the high ground to the south of the Cross. These foundations are at a considerable distance from the site of the nearest extinct Croft (called Cordaugh), and appear to be much more massive than those of the usual cottar house of the eighteenth or nineteenth century.

V.

NOTES ON SOME NORTHUMBRIAN "PELES." BY A. GRAHAM,
M.A., F.S.A., F.S.A.Scot.*Read March 11, 1947.*

In the course of its survey of Roxburghshire, the Royal Commission on Ancient and Historical Monuments has lately identified a small group of buildings of a distinctive and interesting type not previously known in Scotland. No more than four certain examples have been discovered, and all of them are concentrated in quite a small area on and near the head of Jed Water. However, on the English side of the Border structures of identical type survive in much larger numbers and in much wider distribution, the nearest being in Redesdale at a distance of some thirteen miles from the Roxburghshire group. As their special features do not seem to be generally known, the following notes, which were obtained in the course of some work recently carried out in Northumberland, may be of interest to Scottish antiquaries for purposes of comparison.

In the first place something must be said about the use of the word "pele" to describe these houses. In virtue of its derivation, this word, however spelt, should properly apply to a stockade or palisaded enclosure; but it has been used so loosely that this original and correct meaning has been largely lost sight of and misunderstanding and controversy have resulted. To discuss the rights and wrongs of this question now would not be relevant to the subject of the present paper, and I will therefore state that in adopting the term "pele" I am simply following the usage of the Ordnance Survey—and this for the sake of convenience, and without hazarding any opinion as to whether it is correct or otherwise.

The so-called "peles," like the brochs, resemble one another so closely that a general description of one or two normal examples will suffice to indicate the main characteristics of all. Individual features of interest and points of divergence from the normal can then be conveniently dealt with.

At *Gatehouse*, on the left bank of the Tarsset Burn, some three miles above its confluence with the North Tyne, a "pele" stands on either side of the road. The one to the north is in very fair preservation and will serve as a first example. As is shown by Pl. XI, 1, it is a modest oblong structure, two storeys in height, possessing no particularly noticeable external feature apart from the forestair that leads to the first-floor entrance. It measures 37 feet 6 inches from north to south by 23 feet 6 inches from east to west

over walls 4 feet 6 inches thick on the ground-floor and 3 feet 3 inches on the first floor. The forestair, which is the only ground-floor feature on the east side, shows some signs of disturbance and ends in a landing 2 feet below the threshold of the first-floor entrance; this is placed in the centre of the north half of the east face, and shows door-checks, a hole for a stout bar, and sockets for the pintles that took the place of hinges. As the illustration shows, there are two original windows on this side, one round-headed and one rectangular, and a slit which seems to be modern. In the north end there is a door at ground-level, with checks, bar-hole and pintle-sockets and a relieving-arch above, and on the first floor a small square loophole. A small slit shows on the west side on the ground-floor, but otherwise neither this side nor the south end retain any original feature. The roof is modern, and in all probability the skews of the gables likewise. Internally the building contains a single compartment on each floor, the floor itself, which is modern, being supported by joists resting on scarcements. The first-floor room has a fireplace at the south end, flanked by stone slabs and surmounted by a hood which contracts to form a flue in conjunction with a channel running up the inner face of the gable. In the east wall there is a recess which may represent either a blocked window or a large aumbry; two aumbries appear in the north gable and one small one in the west wall near the north-west corner.

A second example is provided by the so-called "*Hole Tower*," a "*pele*" now incorporated in the farm-buildings at Hole, midway between Bellingham and West Woodburn. This structure, which was carefully restored in recent years where weaknesses had begun to appear—*e.g.* in the north-west gable and the forestair—is now in very good preservation, and is one of the class that possesses a masonry vault in place of a floor supported on joists and scarcements. Hole Tower is slightly smaller than either of the buildings at Gatehouse, as it measures about 33 feet from north-east to south-west by 23 feet transversely over walls 4 feet 6 inches thick and standing about 24 feet high to the wall-head. The lower part of the south-east side (Pl. XI, 2 and 3) is largely taken up by the imposing forestair; this leads to a first-floor entrance-door, which is provided with the usual bar-holes and is flanked by windows which have probably been enlarged. On the second floor this south-east face shows two small square windows, chamfered in the same way as the original openings but possibly enlarged none the less. The south-west gable is pierced at ground-level by an original door, the details of which are obscured by the cow-byre that has been built on to this side; and no features appear in the upper part of the gable where this rises clear. The only external feature visible on the north-west side is a window near the north-east end; the north-east gable shows a slit on the ground-floor just above the modern entrance-door, another on the first floor, and pigeon-holes on the second floor (Pl. XI, 5). Internally, as



1. Gatehouse: north pele from S.E.



2. Hole Tower from S.



3. Hole Tower from E.



4. Branshaw Pele: door-check and bar-holes.



5. Hole Tower from N.E.



6. Shittleheugh Pele: interior, showing aumbries.

A. GRAHAM.

NOTES ON SOME NORTHUMBRIAN "PELES."

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[To face p. 38.



1. Woodhouse Pele from N.E.



2. Raw Pele: relief carvings.



3. West Woodburn Pele from E.



5. West Woodburn Pele: entrance, showing marks of fire.



4. Cottage Fireplace at Spittal, Roxburghshire.



6. Black Middens Pele, Shipley Shields, from S.W.

A. GRAHAM.

NOTES ON SOME NORTHUMBRIAN "PELES."

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has been said, the ground-floor is covered by a barrel-vault, its haunch pierced by a hole about two feet square near the north-east end. The first floor contains a modern fireplace at the south-west end and several small aumbries; the north-east end of the room is partitioned off by means of a light wall of rods and plaster mounted on studs, and beyond this a flimsy wooden stair, no doubt modern in its present form, rises to the second floor or roof-space. That the partition may be original, or may stand in the same position as an original partition, is suggested by the position of the first-floor window in the north-west wall, which seems to be placed so as to light the space cut off by the partition. The roof is modern and the eaves seem to have been raised, perhaps to permit of the enlargement of the second-floor windows (Pl. XI, 3).

The normal type of these houses is thus seen to have been a barn-like, gable-ended structure of two storeys, or sometimes of three; it is of small dimensions, fourteen measured examples averaging internally just under 28 feet in length by 13 feet 9 inches in breadth;¹ and it lacks the parapet that distinguishes a castle or a tower. The ground-floor, which is adapted for defence in virtue of its strongly-barred door (Pl. XI, 4), often turning on pintles, and its small slit-openings, is evidently a stable and store-place; while the upper part, which has separate access from without, is intended for human occupation. Aumbries (Pl. XI, 6) and small square windows are found regularly on the first floor, and sometimes fireplaces with flues; but it is doubtful whether these last are original features, except possibly at Raw and Highshaw, and it is probable that the "peles" were designed as temporary refuges only and may not have been used as places of permanent residence until a later stage in their history.

In addition to Gatehouse and Hole Tower, fourteen "peles," as distinct from bastels, were visited, and the special features of these may now be reviewed briefly. Internal dimensions at ground-level are given for every building that could be measured.

Woodhouse Pele (30 feet by 17 feet), at Beacon Grange, near Holystone, possesses some abnormal features such as an internal stair; but this may be due to its having been adapted as a residence, probably in 1602, the date recorded on the lintel.² The aspect shown in Pl. XII, 1, however, is fully typical, the height being due to the presence of a loft above the first-floor room. The basement is vaulted, with a loft at the south end, which is remote from the ground-floor entrance; this entrance, which is almost

¹ Actually the lengths range from 20 feet to 34 feet 6 inches, while the breadths range only from 10 feet to 17 feet—indeed, with the exception of three examples the breadths all fall between 13 feet and 15 feet 6 inches. Increase in size thus seems to have been obtained mainly by addition to length, an inference which is strengthened by the dimensions of Akeld Bastel which, though much longer than any of the "peles" as it measures 54 feet 6 inches internally, is no more than 16 feet in breadth. The reason is no doubt to be looked for in the size of the timbers that were available for floors and roofs.

² On this, however, see *A History of Northumberland*, vol. xv. p. 499.

certainly original, is of interest as being rebated for two doors, only the inner one being barred.

A "pele" in the village of *Thropton*, two miles west of Rothbury, has been reconstructed as a cottage, but the built-up ground-floor entrance can still be seen.

The "pele" (30 feet by 15 feet) that now forms part of the farm-buildings at *Raw*, three miles south-south-west of Holystone, still possesses its upper floor, but its wall-head is modern and its general external appearance has been much disguised by reconstruction. An interesting feature, however, is the pair of relief carvings that seem to have been inserted, after disturbance of the adjoining masonry, one on either side of a small square window at first-floor level—a human head showing traces of Classical influence, and a panel with swags below it bearing a Tudor rose and another much-weathered device (Pl. XII, 2). The basement is vaulted, the centre of the vault being pierced by an aperture less than 12 inches square. The west gable contains a cavity resembling a fireplace, now partially blocked; its original base was apparently about 3 feet above the floor, and its head narrows to a flue-like passage running up into the gable above the vault. A similar feature, but definitely identifiable as a fireplace, also occurs at *Highshaw* (*infra*). No flue appears on the floor above, but there the east gable shows clear marks of fire running up its face to a square aperture just below the peak; this may consequently have been a horizontal outlet for smoke coming from a fire built in front of the gable with a hood and flue applied to the face of the wall, not sunk into it. Pl. XII, 4, shows a flue of this type, photographed in an old cottage at *Spittal-on-Rule*, *Roxburghshire*.

Highshaw Pele (30 feet by 14 feet), which stands about half a mile west of *Highshaw* farmhouse, has now lost the upper storey that it no doubt once possessed. As at *Raw* the basement is vaulted, and the vault is pierced by an aperture; here, however, the aperture is 1 foot 9 inches square and is placed in the haunch of the vault. The entrance is checked for two doors, both provided with bar-holes. The end-wall remote from the door contains a fireplace set about 2 feet above the floor, with the remains of a projecting hood on either side and a flue ascending above it in the thickness of the wall. The back of the fireplace is pierced by a triangular loophole. This fireplace and the aumbry beside it seem to suggest that this basement room was designed from the first for occupation by human beings, not only by animals, and probably for more than temporary occupation at that.

Iron House (34 feet 6 inches by 13 feet), which stands by the edge of a shallow gully some 300 yards west-north-west of *Highshaw Pele*, is interesting chiefly on account of the associated remains. This house forms part of a complicated group of ruined buildings and enclosures, and it is said that the settlement was inhabited within living memory; but part at least of the

enclosure-wall that flanks the gully is made of very massive masonry similar to that used in the "pele," while a series of six rectangular buildings which are backed against this wall seem to be aligned with its axis as if planned in relation to it. This site may therefore provide an example of a "pele" in something reminiscent of its original setting.

The "pele" at *High Rochester* has been rebuilt as a cottage, and most of its original features have been obscured. Its small size, however, is noteworthy, as it measures slightly less than 20 feet by 10 feet internally on the ground-floor. The ground-floor entrance can be recognised though now transformed into a window, and the filled-up first-floor entrance, from which the forestair is said to have been removed in the nineteenth century, can likewise be made out.

Branshaw Pele (30 feet by 15 feet 6 inches) stands by the Roman road three-quarters of a mile east-south-east of Dudlees farmhouse. Only the basement now remains; this is covered by a vault the haunch of which is pierced by an aperture 2 feet square. A breach recently made at one end of the vault discloses the method of its construction; the voussoirs are set in lime mortar, the spandrels are filled with earth and small stones, and above this filling there has been laid a floor of stone slabs up to 3 inches in thickness. The usual method of securing the door of a "pele"—with two massive wooden bars of square section issuing from bar-holes one on either side of the doorway—is well exemplified here (Pl. XI, 4).

Two other "peles" in Redesdale—those at *Shittleheugh* (30 feet 6 inches by 10 feet 6 inches), two miles north-west of Otterburn, and *West Woodburn* (33 feet by 14 feet), half a mile north-west of Lowleam farmhouse—have some features of interest in common. Both, for example, contain enormous stones, particularly at ground-level. In both, the ground-floor entrance is placed in a long side, not in a gable, with the result that the upper entrance—at West Woodburn at least—may have been approached by a ladder, not by a forestair (Pl. XII, 3). Again in both, the floor of the upper compartment rested, in whole or in part, on a corbelled-out ledge instead of on an intake, a feature also observed at Lowleam. Shittleheugh, like High Rochester, is exceptionally narrow for its length. West Woodburn, like Iron House and the reputed "pele" at Evistones, stands in a complex of foundations which may represent a contemporary settlement.

Not the least interesting feature of West Woodburn Pele, however, is the sinister evidence that it bears to its own ultimate fate. The ground-floor doorway is heavily marked with fire, as can be seen clearly in Pl. XII, 5; and the small stones that once filled up the interstices between the larger blocks have disintegrated and largely disappeared under the influence of heat. Besiegers must have burned down the door, suffocating or roasting the people and animals within.

The last "pele" to be mentioned in the Redesdale district is the one

now incorporated in the farm-buildings at *Lowdham*, between Hole Tower (*supra*) and West Woodburn village. Measurements could not be taken when this building was visited, but it is certainly one of the smallest examples seen. All the original features have disappeared except the ground-floor entrance, and the only peculiarity is the corbelled-out ledge that serves to support the first floor in place of an intake (*cf.* Shittleheugh and West Woodburn).

Another group of "peles" occurs on the Tarsset Burn, of which one of the pair at *Gatehouse* has already been described in detail. Its neighbour¹ (28 feet by 14 feet), on the south side of the road, preserves no features of interest; and the same may be said of the much-ruined structure (24 feet 6 inches by 13 feet 6 inches) a quarter of a mile north-west of the ford and footbridge at *Waterhead*,² except for the fact that it is associated with the remains of a number of small buildings. "*Corbie Castle*,"³ however, situated about half a mile north-north-west of this last, is noteworthy as possessing a vaulted basement, and provision for two doors, both barred, in its ground-floor entrance. It is also remarkably small, being only 22 feet 6 inches long by 13 feet 6 inches broad internally. *Black Middens Pele* (25 feet by 14 feet 6 inches), which stands 200 yards north-west of Shipley Shiels farm and close to the junction of the Tarsset and Black Burns, still preserves its upper storey with its original entrance and the forestair leading thereto (Pl. XII, 6); it will be noticed that, as at *Gatehouse*, the forestair ends well below the level of the threshold. The lintel of the doorway has sockets for three iron bars and is therefore probably a re-used window-lintel; the window to the left of the door has had square wooden bars; and the one to the right has been reduced in size since its first construction—unless, as is possible, its lintel was originally made for some larger window.

The foregoing notes do not cover the whole of the material that survives in Northumberland, as remains of "peles" which are on record at the following sites could not be included in the survey: *Crag*, two miles south-west of Holystone; *Gunner's Bar*, three-quarters of a mile north-east of Darden Lough, in the same neighbourhood as *Crag*; *Little Lough*, half a mile east of Darden Lough; *Ray*, Ray Fell; and *Roses Bower*, four miles west of Wark.⁴ Two reputed "peles" in Redesdale, at *Evistones* and *Rattenraw*, have been purposely omitted, as the scanty remains to be seen at both these places are probably those of small towers; and likewise four others in North Tynedale—*Stanners Burn*, *Falstone* farmhouse, *Hawkhope* and *Snabdaugh*—as their identification is also doubtful for one reason or

¹ On both see *A History of Northumberland*, vol. xv, p. 250.

² Shilla Hill, *ibid.*, p. 271.

³ "Barty's Peel," *ibid.*; but see below, p. 43.

⁴ It is reported locally that the ruins of some other "peles," not yet identified or recorded, exist somewhere in the neighbourhood of *Roses Bower*.

another. Of "*Barty's Peel*," which is said to have stood about 100 yards south-east of Comb farmhouse, nothing now remains.

In conclusion, I desire to thank the Royal Commission on Historical Monuments (England) for permission to publish these notes; the National Buildings Record for permission to make use of its photographs for the illustrations; the Royal Commission on Ancient and Historical Monuments (Scotland) for permission to allude to unpublished material; H.M. Stationery Office for permission to publish the photograph appearing as Pl. XII, 3; and my colleague, Mr G. P. H. Watson, F.R.I.B.A., R.S.W., F.S.A.Scot., who first observed these structures in Roxburghshire, for much valuable help and guidance.

VI.

NOTES ON SCOTTISH INCISED SLABS (II).

By F. A. GREENHILL, M.A.(Oxon.), F.S.A.Scot.

Read October 27, 1945.

KINKELL (ABERDEENSHIRE).

Gilbert Grenlau, Esq. (1411).

Two sketches of this slab have already appeared: one, by Andrew Gibb, F.S.A.Scot., in the *Proceedings* for 1876-77,¹ the other, by James Logan, in the second volume of his *Collectanea Ecclesiastica in Provincia Abredonensi* (1819), which are included in the volume (*Logan's Collections*) issued in 1941 by the Third Spalding Club.² My apology for devoting part of this communication to it lies in the fact that neither of these sketches is satisfactory. Both omit certain details and delineate others inaccurately, while Logan, by greatly exaggerating the width, produces a figure of almost Falstaffian proportions, and in neither case was any attempt made to supplement the drawing by an adequate description. The only accurate reproduction I have yet seen is a small photograph at page xxviii of the introduction to the Third Spalding Club volume just referred to, but it was evidently taken in an unsuitable light, for the stone is in shadow, and the incisions do not stand out with the requisite sharpness.

The slab (fig. 1), of brownish sandstone, is placed upright on a low pedestal within the pre-Reformation church of Kinkell, now in ruins, which stands near the left bank of the Don about two miles below Inverurie. The lower portion is lost, and what is now left measures 4 feet 10½ inches by 2 feet

¹ *Proc. Soc. Ant. Scot.*, vol. xli., Part 1, pl. viii.

² P. 88.



Fig. 1. Gilbert Grenlau, Esq. (1411)
(obverse).
Kinkell, Aberdeenshire.

6½ inches. It bears the boldly though somewhat crudely engraved effigy of an armed man, with a marginal inscription and two shields.

This figure is of exceptional interest as an all too rare example of Scottish armour in the opening years of the fifteenth century. Only two other slabs showing Scottish armour of this period are known to me; the first is in the churchyard of Foveran, near Newburgh, Aberdeenshire, and is illustrated and described in the 1908-9 volume of the *Proceedings*; ¹ it has, unfortunately, been somewhat marred by recutting. The second lies in a mausoleum in the policies of Duff House, Banff; here the original figure is obscured, and partially obliterated, by a barbarously cut effigy, the work of an ignoramus, which has been superimposed upon it.

The armour portrayed on the Kinkell slab is of mixed mail and plate. On the head is an acutely pointed bascinet, on the front of which are two curious objects which I have not found on any

¹ Pp. 309-11.

other military monument of the period; from their position, they seem designed for the attachment of a visor. Mr Charles Foulkes, F.S.A., the eminent authority on armour, suggests that they may have been for a removable visor which could be hooked on and off, as distinct from the more normal hinged or pivoted types which were fixed to the helmet. Covering the sides of the face and coming well down over the shoulders is the mail cape or camail, with innecked lower edge. There is no sign of its attachment to the bascinet, to the rim of which it was usually laced by cords passed through a series of staples.

Over the body is the jupon, a tight-fitting sleeveless coat of some stout material faced with silk or velvet, on which are embroidered the wearer's arms. It is shown somewhat shorter than usual, its lower edge being hidden under the bawdric. From beneath it appears the bottom portion of the mail shirt or hawberk, with innecked lower edge. The outline of the body seems to suggest that a cuirass of plate may have been worn over the hawberk beneath the jupon.

Except for the insides of the upper arms, where the hawberk sleeves appear, the arms are wholly encased in plate, with rerebraces (or demi-brassarts) covering the outer sides of the upper arms, articulated coudes at the elbows, and vambraces enclosing the forearms. It may be noted that while the securing straps of the vambraces are shown, those of the rerebraces are left out. The hands, which are bare, are placed one behind the other in an attitude of devotion.

Chaussons of mail are worn on the thighs, and over them, covering the front portion, cuisses of plate, the straps holding them in place being well shown. Of the genouillères only the upper part remains, but they appear to have been pointed in profile, like those worn by the two figures on the Foveran slab. The posture of the thighs seems to indicate that the feet were turned out at an angle of 180 degrees, and the effect must have been most ungainly.

The bawdric, passing around the loins and buckled in front, is divided into narrow vertical sections, probably to denote alternate bands of different coloured material, but the engraver has omitted to complete this ornament on the left-hand side. A plain and much narrower belt, also buckled in front, crosses diagonally from the right hip under the bawdric to the left thigh, where it supports the sword, a ponderous weapon having a pear-shaped pommel, long grip ornamented in a lozenge pattern, and guard with drooping quillons broadening into leaf-like terminations. Attached to the bawdric on the right-hand side by a small strap is the misericorde, with bound grip and trefoil-shaped pommel.

On either side of the head is a large shield, the dexter one now blank (perhaps originally painted); the sinister bears A chevron between 2 water-bougets in chief and a hunting-horn in base. These charges are

repeated on the jupon, the chevron being concealed by the hands and forearms.

Round the edge is a marginal strip containing a black-letter inscription, with roundels, now blank, at the corners; these may possibly have been painted with symbols of the evangelists or contracted words of prayer. The surviving portion of the inscription reads:

"Hic iacet nobilis armiger gilbertus de gre- ----- anno d(omi)ni M.CCCC.XI."

The portion of a fourth letter of the surname is almost certainly the first stroke of an "n", for the surname, fortunately, is not in doubt, the arms on the slab being identical with those of Gilbert Grenlau, the contemporary bishop of Aberdeen (1390-1422), as given on his counter-seal.¹ The fact that the squire had the same Christian name as the bishop would suggest that he was probably a nephew of that dignitary.

Although the day and month of death are no longer on record, owing to the mutilation of the stone, they can be inferred with practical certainty, for on 24th July 1411 the bloody battle of Harlaw was fought within a few miles of Kinkell, and many of the slain are said to have been brought thither for burial. The casualty lists given in the old ballad and in Boece's *History* are confined to a very few of the outstanding leaders, but we may be certain that no Lowland gentleman in the neighbourhood of Aberdeen, least of all a near kinsman of the bishop, could have been backward in answering the call to arms, and had he not fallen in the battle, one might expect that Gilbert Grenlau the squire would have found his last resting-place in St Machar's Cathedral. The fact that he lies at Kinkell seems to imply that he fell early in the action and that his body, when recovered (probably several days afterwards), was in a condition that would effectually preclude its removal for interment in Aberdeen.

The armour worn by Grenlau shows the penultimate stage in the transition from full mail to complete plate, which seems to have been finally achieved over most of the Lowlands by about 1420, as the slabs of David Berclay of Luthrie (1421) at Creich, Fife, and of John Galychtly (of about the same date, and possibly by the same engraver) at Longforgan, Perthshire, both show figures completely armed in plate, save for a few very minor accessories of mail. In the Highlands and Isles mail survived for another couple of centuries, the only example of complete plate I have seen in that area being the early sixteenth-century effigy of Iain MacIain of Ardnamurchan on a slab in Iona Cathedral.

¹ A somewhat imperfect impression of this seal, of date 1398, is illustrated in *Rep. Ep. Aberdeen* (Maitland Club, 1845, vol. II., pl. II., fig. 4); the cast of a better one, dated 1422, is preserved in H.M. General Register House; this is the one mentioned in Laing's *Scottish Seals* (Maitland Club, 1850, p. 174), where the arms are erroneously given as A chevron between 3 water-bougets; they are, however, accurately described in Stevenson and Wood (*Scottish Heraldic Seals*, vol. I. p. 122) and the B.M. Catalogue *Seals*, vol. IV, p. 67).

It might have been hoped that so long as the church stood entire, a monument such as this would have been safe from the spoiler, but in 1592 the slab was turned over, engraved on the back, and laid down again over the tomb of a local laird, John Forbes of Ardmurdo, a scion of one of the greatest houses of the North-East. Whether it was cut down in this process or had previously been cracked across and the lower portion re-used or thrown away, we have no means of knowing, but the purloining of the slab to form another man's monument in a land where stone is plentiful was a mean act of vandalism and common theft for which it is difficult to find adequate words of reprobation.

The reverse (or Ardmurdo) side (fig. 2) bears a marginal inscription in black-letter with a few Roman capitals:

"Hic iacet honore illustris & sancta morum pietate ornat(us) Joan(n)es forbes de ardmurdi" (error for 'ardmurdo') "ei(us) cognominis haeres 4 qui anno aetatis suae. 66. 8 Julii. A.D. 1592. obiit."

Within the margin is a large shield of the some-



Fig. 2. John Forbes of Ardmurdo (1592)
(reverse).

Kinkell, Aberdeenshire.

what fantastic shape in general use at the time, charged with 3 bear's heads coupé and muzzled (Forbes) with a bird's (? hawk's) head coupé for difference. There is no other record of these arms, but the full blazon would probably have been Azure, 3 bear's heads coupé argent, muzzled gules, a ? hawk's head coupé . . . at the fesse point for difference. The initials "I. F." in capitals are placed one on each side of the shield, and beneath it, within a quadrilateral tapering from top to base, is the Greek text of Philippians i. 21:

"ΕΜΟΙ ΜΕΝ ΤΟ ΖΗΝ ΧΡΙΣΤΟΣ ΚΑΙ ΤΟ ΑΠΟΘΑΝΕΙΝ ΚΕΡΔΟΣ."

Four small springs of foliage in the corners complete the design.

The family of Ardmurdo may have hoped that in laying down their new memorial all knowledge of their sacrilege would be hidden for ever. Such hopes, if entertained, were doomed to disappointment, for by 1732 the Grenlau side was uppermost again. The "View of the Diocese" of that year has this interesting and very curious note:

"Here (in the church) is a large gravestone, supposed to be one of the chaplains (*sic*) slain at the battle of Harlaw, because in the inscription the year agrees, being A.D. M.CCC.XI. (*sic*). But this inscription cannot be read compleatly, standing thus: 'Hic jacet Robertus (*sic*) Armiger- - dominus (*sic*) de Stri - -' (*sic*). The arms are, between a cheveron (*sic*), two water budgets, in chief, and a hunting horn, in base. On the stone there is farther carved (*sic*) at large, in a rude Gothic way, the figure of a man partly (*sic*) in armour, praying in a very devout manner."¹

This passage, for its length, must surely contain almost a record number of blunders. It is difficult to account for such a gross misreading of the inscription. But we may turn an indulgent eye on the writer for the sake of the information he has given on the state of the slab at that time. Not a word of Ardmurdo, who had evidently gone underground, the very existence of his monument unsuspected!—a rare and most gratifying instance of poetic justice.

Our next information comes from Logan, who visited Kinkell about 1818. During the interval, the church had been unroofed and dismantled² and presented a scene of utter desolation. In Logan's vivid words: "Since that time it has gone rapidly to ruin, more perhaps from the ravages of man, than the effects of the weather; the polished quoins, and even sepulchral tablets, offering a temptation so strong as to overcome the dread of sacrilege . . . silence now reigns amid the desolate ruins—the rose bush, and the ash grow in the once hallowed precinct, and entwine

¹ *Coll. Shires Aberdeen and Banff*, pp. 573-4.

² Logan gives the date of this as 1771 (*Logan's Collections*, p. 89); Mr Cruickshank, his editor, 1774 (*ibid.*, Introduction, p. xxxi.).

themselves around those mouldering walls, which so long re-echoed to the prayers of the devout." ¹

He found the slab with the Grenlau side still uppermost, and as his notes are silent on Forbes of Ardmurdo, it is evident that he, like the writer of 1732, suspected nothing of what was on the other side. The slab was then, apparently, lying "before the high altar and opposite one of the entrances". He proceeds: "Part of the lower end has been broken off, but it is otherwise in good preservation, for the mass of rubbish with which it is covered effectually protects it from the injury which it would sustain from being trod upon." ¹

While reproducing the inscription in his sketch with some approach to accuracy, Logan failed to decipher it correctly, and his note on the slab is a singular piece of confusion, for he contradicts himself by first attributing it to Sir James Scrimgeour, constable of Dundee, who led the van of Mar's army at Harlaw, after which he proceeds to give the inscription thus:

"Hic iacet nobilis armiger *Robertus* (*sic*) de Scri- - - (*sic*) - - - - anno domini MCCCC II" (*sic*).

and under his sketch is the title "Sir Robert Scrimgeour of Dudhope". One wonders whether he ever read over his own notes!

To have obtained such a reading of the name must surely have puzzled even the eye of faith, and one is tempted to wonder whether it did not originate in wishful thinking. But all else apart, the word "armiger" should alone have sufficed to secure him from the errors into which he has fallen, not to mention the heraldic evidence, which he does not seem to have thought of investigating. ¹

It remains something of a mystery how, during this period of neglect, the slab escaped being carried off and converted to more mundane uses, for Logan records that "the farmer of Ardmurdo" had at one time carried off a mural tablet to the wife of a former parish minister, dated so recently as 1712, "but he was very properly caused bring it back". ² Sacrilege seems to have been an endemic disease at Ardmurdo!

At some time before September 1871, when Jervise contributed to the *Montrose Standard* the article on Kinkell subsequently included in vol. i. of the *Epitaphs and Inscriptions*, ³ the slab had been erected in its present position, exhibiting both sides. Jervise gives a good brief description of it, which I need not dwell upon, as the only errors are very slight ones in the rendering of the inscriptions. He notes that the ruins and burial-ground were still in the most deplorable state, from which they have since been rescued and put into excellent condition by the Ancient Monuments Section of H.M. Office of Works.

¹ *Logan's Collections*, pp. 89-90.
VOL. LXXX.

² *Ibid.*, p. 90.

³ 1875, pp. 304-307.

I visited the place in August 1935, when these rubbings were taken, and although the slab had then been in the open for more than a century and a half, it was still in good preservation—a tribute, if such were needed, to the durability of Scottish sandstone.

I am indebted to Mr Charles Foulkes, F.S.A.; the Lord Lyon; Dr W. Douglas Simpson; Mr H. M. Paton, Curator of Historical Documents, H.M. General Register House; and Miss Mary Smith, interim County Librarian, Montrose, for their kind and much appreciated help.

THE CROSS KIRK, PEEBLES.

*Fragments of a bishop (? from the restored shrine of St Nicholas)
(? c. 1550).*

During the course of excavations in the Cross Kirk in May 1923 a grave-like cavity aligned roughly south-west and north-east was discovered in the south wall below the basement level. In it were found six fragments of a brown sandstone slab engraved with part of the effigy of an ecclesiastic and a few words of a marginal inscription. These were removed to the Chambers Institute Museum, where I found and rubbed them in September 1936. A cast of them has been set up in the church, adjoining the spot where they were found, accompanied by the description, "Shrine of St Nicholas, 1260".

Of these fragments the first, which appears to be a bit of the top dexter corner, bears part of the crocketed head of a crosier, and above it the hand that is often placed at the beginning of marginal inscriptions on sixteenth-century slabs. Of the remainder, three fit together to form part of a figure in a rich cope, and a few words of marginal inscription in quaint capitals:

"M^o. CC^o. LX . OCTAVO".

The other two bear small portions of the marginal inscription, reading "ANO . D(?)N" and "DVS" respectively. The letters are in flat relief on a recessed background, with quatrefoil stops separating the words.

Taking the figure first, the piece of the cope we have is a fine fragment, and gives some idea of the handsome appearance it must have made when the slab was intact. It is embroidered lozengy, each lozenge containing a quatrefoil, and has an orphrey of zigzag pattern. The vestment worn beneath it may be a cassock, or perhaps the alb. The staff of the crosier lies transversely across the body. Mr Richardson's drawing (Pl. XIII) gives what is probably a pretty accurate reconstruction of the figure as it originally appeared.

Copes occur but rarely on incised slabs of priests—I have found no



Shrine of St Nicholas, Cross Kirk, Peebles.

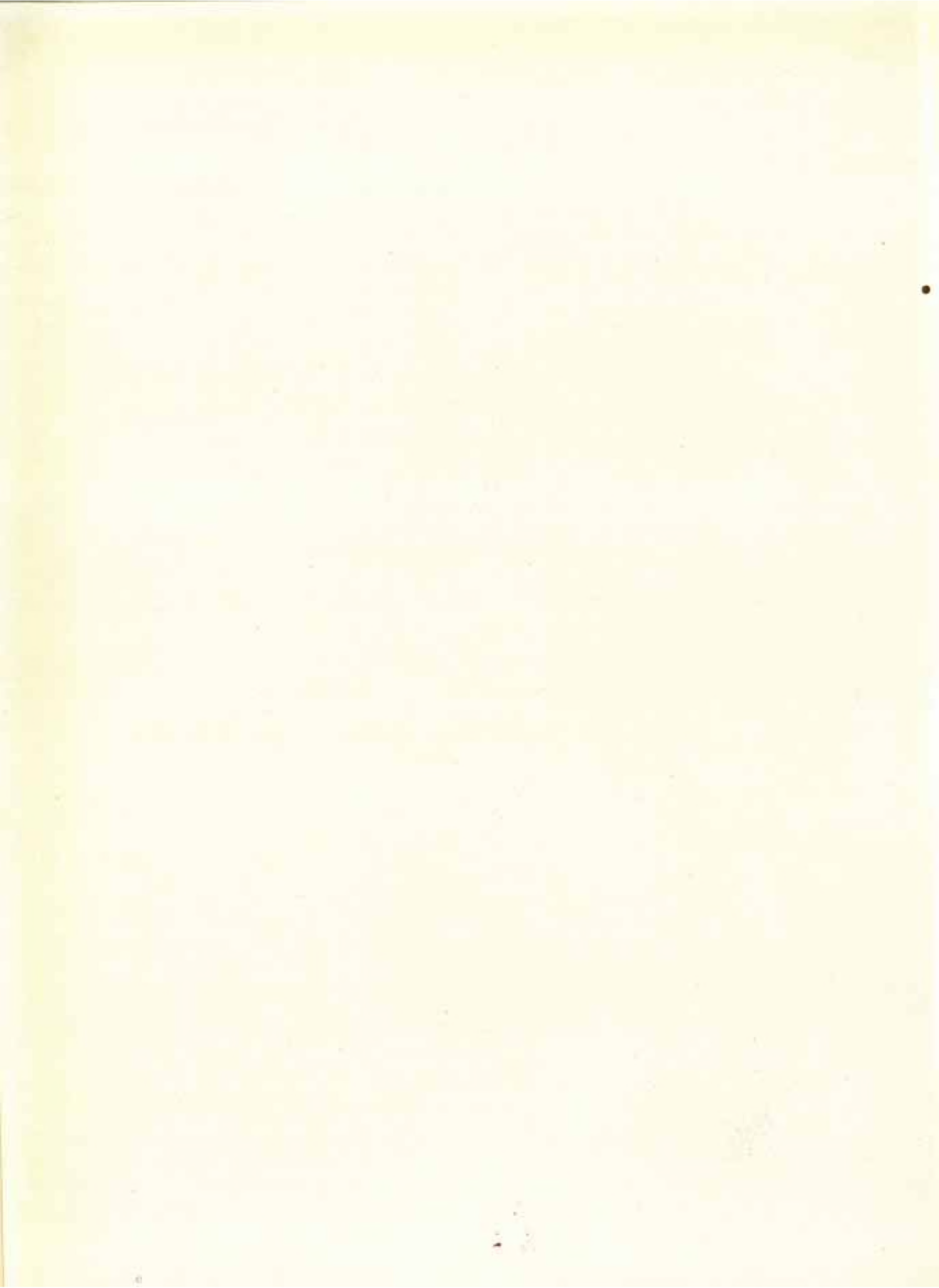
(Drawing showing relative positions and fragments of sculptured slab.)

(By courtesy of James A. Richardson, LL.D., Inspector of Ancient Monuments in Scotland.)

F. A. GREENHILL.

NOTES ON SCOTTISH INCISED SLABS (II).

[To face p. 50.



examples in England, and only two others in Scotland: Abbot Schanwel's at Coupar-Angus, Perthshire, with which I have already dealt,¹ and Prior Donald MacDuffie's (c. 1550) at Oronsay Priory, Argyllshire, which I hope to describe in a later communication. In contrast to the Peebles cope, Abbot Schanwel's is plain, save for the orphrey; Prior MacDuffie's is ornamented with a series of diagonal bands (probably to denote strips of different coloured material) and some embroidery, in addition to the orphrey.

Coming now to the inscription, there seems little doubt that, despite the date given, this is mid-sixteenth-century work, for the queer lettering used is of a type found on monuments of c. 1550, and the hand placed at the commencement does not, so far as I am aware, occur on monuments of the thirteenth century. I have not found it earlier than 1480, and it does not become common until the second half of the sixteenth century.

But what is a thirteenth-century date doing on a slab seemingly engraved nearly three hundred years later? To attempt an answer, we must pass in brief review the history of the Cross Kirk.

The church was founded by Alexander III, apparently in the seventh decade of the thirteenth century. Although it did not become conventual till about 1473, when domestic buildings were added for a community of Trinitarians,² it seems to have been served by members of that Order from the beginning.

According to Fordun, the founding of the church arose out of the discovery at Peebles of "a stately and venerable cross" lying in a stone on which was inscribed "*Locus Sancti Nicholai Episcopi*"; a little later another find was made at a few paces' distance—an urn containing human ashes and bones. Miracles were reputed to be performed at the spot, and the place rapidly began to attract pilgrims. On account of this the King, after consulting the diocesan, had a handsome church erected there to the honour of God and the Holy Cross.

Of "Saint Nicholas the Bishop" nothing appears to be known: quite apart from the conclusions induced by a study of the cavity, the opinion current in Fordun's time that the human remains were those of a martyr put to death during the persecutions under Maximian at the close of the third century A.D. would be open to serious doubt, in default of evidence that these persecutions ever extended to the province of Britain. But the existence of such an opinion in mediæval times is of some importance, for it entailed the acceptance of St Nicholas as the protomartyr of Scotland, whose grave would be regarded as a place of peculiar sanctity. It seems

¹ *Proc. Soc. Ant. Scot.*, vol. lxxviii, pp. 81-5.

² Though sometimes referred to as "Trinity Friars" or "Red Friars", the Trinitarians were, strictly speaking, neither friars nor monks, but canons regular who followed the rule of St Augustine. One-third of their revenues was by their constitution devoted to the ransoming of Christians held in captivity among the heathen.

that this hallowed spot was the cavity in the south wall in which these fragments were discovered, and over which the shrine of the saint was erected.

When Grose visited the Cross Kirk in May 1790, only six years after it had ceased to be used as the parish church, there was clear evidence of an arch having been made in the south wall at the first building of the church, over the spot where the cavity was brought to light in 1923. Of this feature nothing now remains, but during the excavations a portion of the wall on the inside was removed to a height of 1 foot 7 inches from ground-level, leaving most of the cavity exposed to view. Mr Richardson gives a detailed description of the arch and cavity, and a conjectural restoration of the shrine (fig. 4), in the Note he has kindly contributed to this paper.

Although the urn and its contents were somehow associated with the cross in the mediæval mind, the fact that they were not buried with it seems to afford strong presumption that the two discoveries were quite unconnected and their juxtaposition purely fortuitous. It is worth noting that Fordun, writing in the fourteenth century, seems to have had his doubts about the bones, for in speaking of them he cautiously remarks: "Whose relics these are, no man knows as yet. Some, however, think that they are the relics of him whose name was found written in the very stone wherein that holy cross was lying." From Mr Richardson's description of the grave, it seems probable that these bones, supposed in mediæval times to be those of a Christian martyr, and no doubt venerated as such, were actually those of a heathen of the Bronze Age!

The architectural treatment adopted at the erection of the shrine (see fig. 4) was designed to enable pilgrims to approach it from outside and touch the grave of the saint, and although the cross found in King Alexander's day and known as the Holy Cross of Peebles seems, at least in later pre-Reformation times, to have been the principal object of devotion, the protomartyr's tomb would at least provide an added attraction, and its accessibility at any hour must have given it a great advantage over others less conveniently placed, such as St Waltheof's at Melrose, which stood in the chapter-house, to which pilgrims could only be admitted at certain times.

It is hard to repress a suspicion that the existence of St Waltheof's shrine at Melrose may have had something to do with the erection of the Cross Kirk at Peebles. Waltheof, second abbot of Melrose, died in 1159, having in his lifetime acquired a high reputation for holiness, and pilgrims seem almost at once to have been attracted to his tomb. In 1171, twelve years after Waltheof's death, Jocelin, the fourth abbot, had the grave opened, when the body, with all its vestments, was found to be still intact, thus establishing his saintliness according to contemporary standards. Three years later Jocelin became bishop of Glasgow, and is said to have encouraged pilgrimages to Waltheof's tomb. Now Peebles lay right in the path of persons journeying

from Clydesdale to Melrose; in the later Middle Ages there was a hostility of Melrose Abbey in the Old Town, though at what time it was erected seems to be unknown, but it may well have been there by the middle of the thirteenth century, when the St Waltheof cult was probably reaching its height. The existence of a regular pilgrim route through the town would offer the Trinitarians (some of whom must have been at hand when the cross and bones were unearthed) a heaven-sent opportunity of exploiting a ready-made source of income for the benefit of their own meritorious work, and we need not wonder that miracles were at once imputed to the new find, which doubtless succeeded in absorbing some of the offerings that would otherwise have found their way to the tomb of St Waltheof.¹ It is somewhat remarkable that the Chronicle of Melrose, which records the foundation of a number of churches and houses of religion in Scotland and England, and even of a few abroad, says not a word about the discovery of the relics and founding of the Cross Kirk at Peebles, only twenty-one miles distant: the omission may be due to jealousy.

But the prosperity of the new foundation did not rest on what might be diverted from St Waltheof, for in course of time the pilgrimage to the Holy Cross of Peebles grew to be one of the most popular in Scotland. At least two hostels for the accommodation of pilgrims were in existence in the fifteenth century before the addition of the conventual buildings, one in the town at the west end of the North Row, the other at Eshiels, near the ford of Tweed at Cardrona. While it was not until 1530 that a festival was established specifically to commemorate the finding of the Cross at Peebles, the sacred relic was doubtless exhibited for adoration in earlier years on the anniversary of its finding, as well as on feast days or other special occasions, and the most appropriate point for its display would be at the tomb of the reputed saint near whose remains it was found.

The pilgrimage outlasted the fall of the pre-Reformation Church by a good forty years. An Act of the General Assembly in 1580 provided (Article 5) "that ane punishment may be made for sick as passes in pilgrimage to kirk or wells; and that ordour may be tane with them that past latelie to the Halie Rud of Peebles and sic uther places"; but the old custom died hard, witness the following extracts from the Presbytery records:—

"1599, May 10. Anent the ordinance that was given to William Sanderson (Innerleithen) minister, and some of the brethren, to await with certain gentlemen and bailies of Peebles, to apprehend them that come in pilgrimages to the Croce Kirk, together with our brother, John Fausyde (Newlands), according to a commission given him direct from the provincial assembly of

¹ The case of St William of Perth, the erection of whose shrine in Rochester Cathedral was no doubt designed to divert offerings from St Thomas of Canterbury, affords an interesting parallel. See "Saint William of Perth and His Memorials in England", by Mr James S. Richardson, in *Scot. Eccles. Soc. Trans.*, vol. ii. p. 122.

Lothian, halden at Prestoun Kirk, of date the first day of May 1599, they reported that they apprehended certain men and women, whose names they gave up in writing as follows: William Douglas in Hawick; James Wauche and Janet Diksoun, his spouse, there; Cuthbert Gledstaines and Marioun Greiff, servants to the laird of Gledstaines; Walter Johnstone and Adam Hopkirk, in Mynto; and James Kar, dwelling in the Auldwerk, in the parish of Selkirk. The Presbytery ordain the clerk to direct a letter to the Presbytery in whose bounds these persons reside to take order with them.¹

"1601, April 30. The Presbytery appoint that every brother desire some gentlemen of their parish to be present on Saturday at even, and on the Lord's day thereafter, to prevent and stay the superstition of the people coming to the Cross Kirk of Peebles."²

"1601, May 14. It is reported by the minister and bailies of Peebles that at this Beltane there was no resorting of people into the Croce Kirk to commit any sign of superstition there. Wherefore in the Lord the Presbytery rejoiced, exhorting them in like manner in time coming to use the like diligence, that all abuse of the place may be avoided."²

"1602, April 29. It is condescended that the parsoun of Peebles shall wait on such persons as superstitiously repair to the Croce Kirk at this Beltane, and endeavour to have them apprehended, and punished by the magistrate."²

The available evidence, though scanty and somewhat confused, would suggest that the only relic *shown* at the Cross Kirk in pre-Reformation times was the Holy Cross of Peebles, and this is no doubt the "relyk" mentioned in connection with the installation of John Jameson as Master (or Minister) in 1456. There is nothing to show that the bones of St Nicholas were exhibited; presumably they had been buried in the shrine made in the south wall at the building of the church.

A letter of James V dated 1st July 1529 would at first sight imply the existence of another relic at the Cross Kirk, for it refers to the church and conventual buildings as the "place of Peblis . . . quhair ane pairt of the verray Croce that our Salvatour was crucifyit on is honorit and kept".³ The only other mention I have found of such a relic is in Boece's *History*, published 1526, and here the author is clearly confusing the Holy Cross of Peebles with a fragment of the True Cross. It is worthy of special note that the document of 18th April 1530 (less than a year after the King's letter), which records the establishing of a yearly feast on 15th May to celebrate the discovery of the cross at Peebles, gives not the faintest hint that it was then regarded as part of the True Cross, while the dedication

¹ Dr C. B. Gunn, *Book of the Cross Kirk of Peebles* (A.D. 1500-1600) (Peebles, 1912), pp. 58-9.

² *Ibid.*, pp. 67-8.

³ *Ibid.*, p. 70.

⁴ Renwick, *A Peebles Aisle and Monastery* (Glasgow, 1897), p. 81.

of the church in honour of the Holy Cross of Peebles (as distinct from the Holy Rood) seems to prove that it was certainly not considered to be part of the True Cross in the thirteenth century, and Fordun would surely have mentioned such a belief, had it existed in his day, for he faithfully records the opinion then current that the bones were those of St Nicholas. Seeing that the Holy Cross of Peebles was in mediæval times supposed to have been buried there about the year 296, thirty years before the True Cross was discovered in Palestine, it is difficult to conceive of any grounds for regarding the one as part of the other. Yet some such idea may well have begun to take shape in the popular mind towards the end of the pre-Reformation period. The evidence of the Presbytery records goes to show that the principal pilgrimage to the Holy Cross of Peebles was made at Beltane, which was also the festival of the finding of the True Cross, and the coincidence may easily have led to confusion; indeed, the wording of Article 5 of the Act of the General Assembly of 1580 would suggest that this was just what occurred, the Holy Cross of Peebles becoming finally identified in the minds of the multitude with the Holy Rood of our Saviour.

Boece may possibly have been responsible for giving birth to this belief, but it is on the whole more likely that he was only giving expression to an idea already prevalent in the early sixteenth century. Be this as it may, it appears probable that the reference in the King's letter is to the Holy Cross of Peebles, which he, in common with many of his subjects, erroneously believed to be a fragment of the Holy Rood, although it seems clear from the instrument of April 1530 that the local clergy did not share this belief, but were well aware of the true position.

It is, of course, just possible that the King was right, and that in addition to the Holy Cross of Peebles, a reputed piece of the Holy Rood was preserved at the Cross Kirk in later pre-Reformation days. If so, it presumably found its way there at some time subsequent to 1456.

During the excavations of 1923, certain foundations abutting the cavity were exposed, which appear to indicate the site of an altar. It is curious that no reference to any altar dedicated to St Nicholas has come down to us, but this may be due to the extensive loss of records which is believed to have occurred in the conflagration of 1549. The only altars mentioned in the surviving records are those of the Holy Cross (High Altar), the Holy Blood, and St Sebastian.

The first half of the sixteenth century found the Cross Kirk and its little community in the enjoyment of considerable prosperity. But towards the end of 1549 the scene changed abruptly. English invaders set fire to Peebles and much of it was destroyed, including most of the town church of St Andrew. The Cross Kirk, though relatively fortunate, did not escape unscathed, and it may confidently be inferred that while the cross would doubtless have been removed in time to a place of safety, the shrine must

have suffered rough treatment at the hands of the Protestant enemy, including almost certainly the smashing of the sculptured effigy or other portrayal of the saint.

There is evidence that the Cross Kirk was afterwards restored, for in 1558 Gilbert Broun, the Minister of the convent, granted two charters; the first, in consideration of 600 merks paid "for reparation of the place burned by the English in the time of the last war", and an annual feu duty of 30 merks, grants to James Home in Dunbar certain properties in that town; the second, in consideration of 300 merks contributed for the same purpose, grants to James Small, the former rentaller, the manse and church lands of Kettins in Angus in feu farm for payment of £8 of old duty and 40 pence of augmentation.

The fragments of this slab appear to establish that some restoration of the shrine was also attempted, the coped bishop being presumably a representation of the saint. This restoration cannot have endured for more than a decade, for in 1560 the burgesses petitioned the Privy Council that the Cross Kirk might be granted to them as their parish church in place of the destroyed town kirk, which had not been rebuilt, promising to "exclude furth of the samin all maner of idolatry". The request was granted, and on 11th December Broun, who was still Minister, handed over to the bailies the key of the outer door of the church, and the tomb of the saint was probably broken up almost at once, if it had not already perished at the visitation which John, Master of Maxwell, had made on behalf of the Lords of the Congregation on the previous 30th of March. It is somewhat remarkable that even such slight remains as these have been preserved to the present day.

The fact that this slab, apparently engraved *c.* 1550, bears a thirteenth-century date seems to put it beyond reasonable doubt that it formed part of the restored shrine. Two further questions now arise: is this date 1260 or 1268, and what is its significance?

The only interpretation so far given seems to be that of the late Dr Clement Bryce Gunn, the historian of the Cross Kirk. In his fine series of books on the church, all written before the excavations of 1923, he adopted 1261 as the date of foundation, following Fordun's narrative of the finding of the cross on 9th May in that year. But a study of the inscription on the slab must have induced a change of opinion, for in a paper on "The Church of Peebles" contributed in 1932 to the *Transactions of the Scottish Ecclesiological Society*¹ he states: "The Cross Church was founded on the 8th day of May in the year 1260." Presumably he arrived at this date in one of two ways:

- (a) by assuming that the words following "octavo" were "die mensis Maii", or

¹ Vol. x. p. 89. Dr Gunn does not mention the slab, but it appears to be the only piece of evidence that has come to light since the publication of his books which could have caused him to alter his mind.

- (b) by treating the fragment "DVS" as forming part of the word "idus" and following immediately after "octavo", thus getting the reading "ano.dn(i).M°.CC°.lx.octavo.(i)du.s.(Maii)".

There is, however, no certainty that any month was named in the inscription, and the fragment "DVS" might not have formed part of "idus", but of some other word, e.g. "reverendus": even if it did form part of "idus", there is still nothing to show that it came *after*, and not *before* the year, for while there was no fixed practice, it is far commoner to find the day and month placed *before* the year on pre-Reformation inscriptions. If "idus" *did* come after "octavo" and the next word *was* "Maii", it is not quite certain even then that the date would be 8th May 1260—it *could* (though with much less probability) be read as 15th May 1268, while if "idus" *preceded* "ano.dn(i)", the year would be 1268.

Other modern writers have assigned dates varying from 1257 to 1262 for the founding of the church. Of these, I have relegated to a footnote all but two,¹ who as the most important merit quotation.

Thomas Dempster, whose *Ecclesiastical History of the Scottish People*, written in Latin, was first published at Bologna in 1627, gives this account:

"St Nicholas, a Culdee, and one of the first bishops of the Church of Scotland, suffering martyrdom while Maximian's persecution was raging through Britain, the most holy remains of his body, cut in pieces and mutilated, laid up in a stone urn, and buried in the earth together with a certain venerable cross, and afterwards dug up, deserved veneration by this inscription: 'Of St Nicholas, bishop', for which thereafter King Alexander III, at the request of the Bishop of Glasgow, built a magnificent church at Plebes (or rather Peebles): which, while piety endured among our countrymen, was illustrious by the glory of its miracles, and was frequented by a wonderful concourse of people. This bishop suffered martyrdom in the year 296. His sacred body, known by the inscription, was found, and with the cross exalted, on the 7th of the Ides of May, in the year 1262; which was the thirteenth of King Alexander III, as appears in the *Scotichronicon*, book 14, chapter 16."²

Grose cites a variety of dates and authorities. "This," he says, "is part of the Conventual Church built, according to Boecius, Major and others by King Alexander III A.D. 1257. Some say it was erected on the spot

¹ See J. Laing, *Supplemental Catalogue of Ancient Scottish Seals*, p. 240 (1257); *New Statistical Account*, No. III, p. 6 (1260); *Old Statistical Account*, XII, p. 13 (c. 1260); Chambers, *History of Peeblesshire*, p. 293, *Origines Parochiales Scotiae*, I, 229, and Renwick, *A Peebles Aisle and Monastery*, p. 24 (1261); Williams, *Glimpses of Selkirk and Peebles*, p. 10 (c. 1261); Buchan, *History of Peeblesshire*, ii. p. 2 (1261-2); Glenriddell MS. Collections (quoted by Renwick, *A Peebles Aisle and Monastery*, p. 19, n.) (1262). Renwick, *Peebles in Early History*, gives 1262 at p. 11 and 1261 at p. 29. Sir George Douglas, *Roxburgh, Selkirk, and Peebles*, pp. 136-7, mentions Fordun's account of the discovery of the cross in May 1261, but gives no date for the founding of the church.

² My translation.

where the reliques of St Nicholas, a martyr, were discovered; but from the account of this discovery preserved at Peebles, it appears that this event did not happen till May 7th 1262. . . . Fordun says 1261, and the Chronicle of Melrose places this discovery in 1260. . . . Fordun thus relates the circumstances of finding these reliques. In the same year, *i.e.* 1261, 7th Id. May," etc.¹

The account preserved at Peebles to which Grose refers was compiled in December 1640 by Andrew Watson, "Vicar of Peebles", from records preserved in the library of St John's College, Cambridge. It consists of the passage from Dempster which I have just quoted, followed by another from a MS. of the *Scotichronicon* then at St John's, of which more later. The whole, together with a translation made for the magistrates by John Frank, is printed in Alexander Pennecuik's *Description of Tweeddale* (1715).²

Let us now hear what the early writers have to say.

The founding of the Cross Kirk is not mentioned in the records of the diocese of Glasgow, neither (*pace* Grose) does the contemporary Chronicle of Melrose refer to it. The earliest account we possess is that of John of Fordun, composed about a century after the event. Twenty-one MSS. of his writings are known, of which five only appear to consist of his original work, comprising the "*Chronica Gentis Scotorum*" (down to 1153) and "*Gesta Annalia*" (covering the period 1153-1383), and these were the ones used by Skene in preparing his edition for the *Historians of Scotland* series. The other sixteen, containing Fordun's text as amended and added to by Bower, together with his continuation down to 1447, are known as the "*Scotichronicon*".

Fordun's description is in Chapter LIV of the "*Gesta Annalia*"³:

"On the 9th of May 1261, in the thirteenth year of King Alexander, a stately and venerable cross was found at Peebles in the presence of good men, priests, clerics, and burgesses. But it is quite unknown in what year, and by what persons, it was hidden there. It is, however, believed that it was hidden by some of the faithful about the year of our Lord 296, while Maximian's persecution was raging in Britain. Not long after this, a stone urn was discovered there, about three or four paces from the spot where that glorious cross had been found. It contained the ashes and bones of a man's body, torn limb from limb as it were. Whose relies these are, no man knows as yet. Some, however, think they are the relies of him whose name was found written in the very stone wherein that holy cross was lying. Now there was carved in that stone, outside, 'Tomb of the Bishop, Saint Nicholas'. Moreover, in the very spot where the cross was found, many a miracle was and is wrought by that cross; and the people poured and still

¹ *Antiquities of Scotland*, vol. ii. p. 219.

² See *Works of Alexander Pennecuik*, 1815 edition (Leith), pp. 275-8.

³ *The Historians of Scotland*, ed. W. F. Skene (Edin., 1872), vol. iv. pp. 204-5.

pour thither in crowds, devoutly bringing their offerings and vows to God. Wherefore the king, by the advice of the bishop of Glasgow, had a handsome church made there, to the honour of God and the Holy Cross."¹

The date, as given in the Latin text of Skene's edition is "Septimo idus Maii mensis anno Domini MCCLXI et regni regis Alexandri (X)III", *i.e.* 9th May 1261, 13 Alex. III.

We now come to the MS. of the *Scotichronicon* at St John's College, Cambridge, from which Watson made his extract in 1640. The relative passage—the one cited by Dempster—corresponds almost exactly with that in Skene's edition, except for the date "Septimo Iduum mensis Maii anno domini 1262, et Regni regis Alexandri 3rd 13", *i.e.* 9th May 1262, 13 Alex. III.²

While there is no doubt that this MS. was in St John's College library in 1640—for the correctness of the transcript was certified by three of the Fellows—it has since disappeared, and its present whereabouts are unknown. It does not figure among the twenty-one MSS. enumerated by Skene.

The difference in date between the two versions is easily accounted for. Alexander II died on 8th July 1249, and 9th May 1261 would therefore fall in the twelfth and not the thirteenth year of his successor. The copyist of the St John's College MS. evidently spotted the inconsistency and altered the year to 1262. Fordun's error may, however, have been in the calculation of the year of Alexander's reign, so that it remains uncertain whether he intended 1261 or 1262.

The next account comes from *The Book of Pluscarden*, compiled shortly after the middle of the fifteenth century (Book VII, Chapter XXII):

"In the year 1260 Pope Urban instituted the solemn feast of Corpus Christi. . . . The following year" (*i.e.* 1261) "a valuable cross was found at Peebles buried underground, which had been buried about a thousand years before; and, with the consent of the bishop of Glasgow, the king built there the famous church of Peebles in its honour."³

While the writer is in error regarding the feast of Corpus Christi—for Urban IV was not elected Pope until 29th August 1261, and did not publish the bull "Transiturus" till 8th September 1264—this does not necessarily invalidate his account of the finding of the cross, for the other Scottish events of the period are assigned by him to their proper dates. The year

¹ A comparison of this passage with Dempster's account, which purports to be derived from it, provides a somewhat ironic commentary on the seventeenth-century historian. Fordun, while faithfully recording the opinions current in his own (fourteenth) century, preserves towards them a most praiseworthy caution. Dempster, writing in a more scientific age, swallows them whole, and boldly narrates them as facts.

² Both Frank and Grose incorrectly render "Septimo Iduum mensis Maii" as "7th May". It is a little surprising to find men of education in the seventeenth and eighteenth centuries so imperfectly acquainted with the Roman calendar.

³ *The Book of Pluscarden*, ed. W. F. Skene (*The Historians of Scotland*, Edin., 1880), vol. ii. p. 67.

intended for the Peebles incident seems undoubtedly to be 1261, following Fordun, whom he appears to have used as one of his authorities.

John Major's *History of Greater Britain*, published 1521, has this passage at Chapter XII of Book IV: ¹

"In the year of the Lord twelve hundred and fifty-seven, and in the thirteenth year of Alexander's reign, there was born to him a daughter, Margaret by name. And in the same year there was discovered at Peebles a very beautiful and ancient cross, for which Alexander showed his pious feeling by ordering that a church should there be built."

This passage contains two errors: the thirteenth year of Alexander III was not 1257, but 1261-2, and the Princess Margaret was born in February 1261, in the twelfth year of his reign. Major's date must therefore be taken as either 1261 or 1262.

Lastly we have Hector Boece's version in chapter 16 of Book XIII of his *History of Scotland*, published in 1526. I quote from the translation into Scots made by John Bellenden, Archdean of Moray: ²

"About this time Paip Urbane, the fourt of that name, institute the feist of Corpus Cristi, to be ilk Thurisday efter Trinite Sondag. . . . It is said that ane monke of Melros was admonist in the samin time, be ane vision in his sleip; and fand ane part of the haly croce, nocht far fra Peblis in Louthiane, within ane cace: and nocht far fra the samin, they fand ane pig craftely ingrain, in quhilk was found certane bonis wound in silk, bot it was not knawin quhais bonis thay war. Als sone as the cace was opnit quhare the haly croce was inclusit, mony miraculis apperit. King Alexander, movit be devotioun thairof, biggit ane abbay in the honour of the haly croce: in the quhilk are now monkis efter the ordour of the Trinite."

This account cannot be accepted as of much value; the silence of the Melrose Chronicle would alone suffice to discredit it. Boece does not, however, as Grose alleges, give the date of founding of the Cross Kirk as 1257, but implies that the relics were found during the pontificate of Urban IV (1261-64).

It can thus be asserted that none of the pre-Reformation writers places the finding of the relics earlier than 1261, and unless they all erred on this point, it seems unlikely that the year recorded on the slab could have been 1260, except by an engraver's error, and it is presumably 1268. To what does it refer?

It will be noted that none of the early authorities gives a date for the *founding* of the church, but only for the discovery of the cross and bones, and Fordun's language might well imply a fair interval between these two events. In any case, some considerable time would elapse before the church

¹ *Scol. Hist. Soc.*, 1892, p. 188.

² *Bellenden's Works* (Edin., 1822), vol. ii. p. 346.

was completed. It was not a large one, but the whole, apart from a western tower added in the fifteenth and early sixteenth centuries, appears to have been in the First Pointed style, and was probably built in one continuous operation. The shrine, no doubt, was erected concurrently with the church, or immediately on its completion.

Having regard to the position occupied by the date, it seems that the inscription on the slab was probably a record of the entombment of the saint's bones in the shrine, which event presumably occurred at some time during the year 1268.

It is, of course, impossible to restore the missing words with any approach to certainty, but the inscription *may* have run somewhat as follows:—

- (a) (If "DVS" formed part of "idus") "Sepultae sunt (?) - - - idus - - -
Ano Dni M° CC° LX octavo in hoc loco reliquiae Sēi Nicholai
epī et martyris", or
- (b) (If "DVS" was *not* part of "idus") "In hoc loco sepultus est Ano
Dni M° CC° LX octavo redv̄us pat' Nichus ep̄s et martyr occisus
Ano Dni CC° XC sexto".

I cannot conclude without a tribute to the researches of the late Robert Renwick and Dr C. B. Gunn, of which I have largely availed myself in preparing these notes.

I have also to express my special acknowledgments to Mr James S. Richardson, Inspector of Ancient Monuments, whose help and counsel have been invaluable. My grateful thanks are also due to Mr M. R. Dobie, Keeper of Manuscripts, National Library; Mr Ian R. Russell, Dumfries; Mr Hugh Gatty, Librarian, St John's College, Cambridge; Miss N. Bethune, Chambers Institution Library, Peebles; and the staff of the Ewart Library, Dumfries.

NOTE ON THE CROSS KIRK AT PEEBLES.

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According to the chroniclers, the discoveries made at Peebles (c. 1260) were (1) an object which appeared to them to be a cross of artistic importance and of antique form, and (2) a grave containing an urn and skeleton remains. There appears to have been a slight interval between the finding of the one and the finding of the other, but in the minds of those who were concerned with the discoveries the one find was connected in some way with the other. A clue to the possible nature of the cross is indicated in the *Accounts of the Lord High Treasurer of Scotland*. There are entries recording

the amount of money given at various times by King James IV as offerings to "the Haly Cors of Peblis", and others indicating that this relic was subject to a certain amount of repair towards which four ounces of gold amounting in value to £25, 15s. 3d. was contributed in 1505 by the King. Three years later James IV commissioned Matthew Auchleik his goldsmith to remake a fourth part (i.e. the lower arm of the cross) out of $1\frac{1}{2}$ ounces of gold, and also a stand or base for it of silver weighing 4 ounces. The whole expenditure for goldsmith's time and the precious metals required for the work amounted to £43, 7s. 7d. It is thus clear that the cross venerated at Peebles was of no great size, and that two hundred and fifty years after its discovery it required repair and a certain amount of restoration. Whether the cross found was of metal or of wood encased in metal remains a mystery, but it must have had sufficient appearance to warrant the early "antiquaries" stating that it was "magnificent and venerable".

The nature of the second discovery is more easily appreciated. The description given of the grave suggests a short-cist burial of the Bronze Age, and this is to some extent confirmed by the existing remains which are represented by the cover slab and the two side slabs. The composition of the floor is also in accord with such burials. At the time of the erection of the south wall of the church which now spans the cavity, the end slabs were removed and the grave lengthened in rough rubble. This lair is below the basement level of the wall, and its long axis points in a north-easterly direction with the ends of the grave protruding beyond the width of the wall. The cavity is over 6 feet in length, approximately 2 feet wide, and about 2 feet deep.

It is quite possible that the site of the grave was marked by a cairn which would be known as a landmark to those resident in the locality, and that the cross may have been purposely hidden in the cairn some few hundreds of years before it was discovered. There is, however, little doubt that the Holy Cross of Peebles was the main object of veneration and that the grave of the supposed saint took second place. This at least appears to have been so in the later history of these objects of veneration, for we find no reference made to the feretory of the local saint in the *Lord High Treasurer's Accounts*; whereas in these folios there are entries referable to the King's offerings at the shrines of St Margaret at Dunfermline, St Duthac at Tain, St Mirren at Paisley, and St Ninian at Whithorn.

It was to the advantage of the Church to stimulate the cult of pilgrimages, and this form of worship was particularly marked in the thirteenth century. For this reason the bishop of Glasgow, in whose diocese the discovery was made, caused a church to be built by King Alexander III. The church founded by the King was designed to meet the needs of pilgrims, and its plan was so arranged that the feretory of St Nicholas the bishop was conveniently located in the south wall, so as to be accessible to devotees con-

gregating on that side of the building. The plan (fig. 3) was oblong and not of cross-form, as one would have expected from the name of the church. The dedication was in honour of the Holy Cross of Peebles and not to the Holy Rood or Cross of our Saviour. The building was 113 feet long by 33 feet wide, and had a projecting revestry on the north side entered from the quire. It was constructed of local whinstone, but the facings of the doorways, windows, skews, basement course, string course, and that at the wall-head were of dressed sandstone. The architectural detail, still evident, conforms in character with that in vogue in the second half of the thirteenth century.

The roof was of timber and steep pitched. In the revestry were kept the

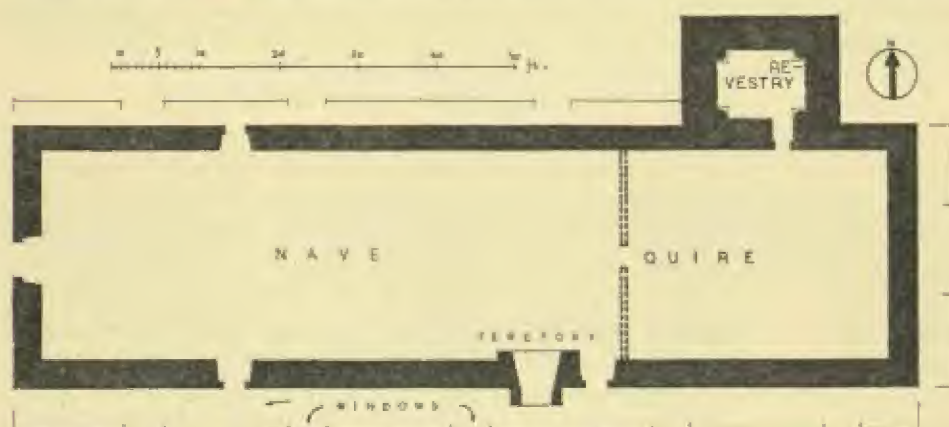


Fig. 3. Plan of Cross Kirk, Peebles, as originally built.

(By courtesy of Ancient Monuments Inspectorate, Ministry of Works.)

Holy Cross of Peebles and the altar vessels, and this was the only part of the structure vaulted in stone—a necessary precaution against fire; the walls were also thicker than those of the kirk, as they had to contain the wall presses in which these treasures were placed for safe-keeping.

The kirk had four entrance doorways, the principal one being in the west wall, two in the south, the one 27 feet from the west end and the other 40 feet from the east—the distance between these doorways being 46 feet, and the former had a counterpart directly opposite to it in the north wall. All the windows were large and mullioned, the upper parts being of simple tracery. Their dispositions were as follows: one over the west portal, five in the south wall, one in the east, and three in the north.

In the Hutton Collection of MSS., preserved in the National Library, there is a letter dated 1790 written by the Rev. William Dalgleish, the parish minister: in it he gives a full description of the Cross Kirk as it was in his time when it was less ruinous than it is to-day. The letter is accompanied

by a plan apparently drawn by the reverend gentleman; on it he shows the outline of the aperture in the wall at the feretory which he rightly assumes to cover the grave of the local saint. In his description of the feretory he states: "In the fore wall of the church between the third window from the west and the door on the east of that window there has plainly been an aperture and arch made at the first erection of the church, of a particular construction, four feet wide and two and a half feet high on the outside, but increasing into between six and seven feet in width and eight feet in height in the inside, with decorations of freestone projecting beyond the line of the wall, not done in any other part of the church." Further on in his account he remarks on this feature "projecting without the wall on the outside". Apparently this author provided Captain Francis Grose with a similar description as he did for General Hutton, for the former printed it verbatim in *The Antiquities of Scotland*, vol. ii., published in 1791.

In order to appreciate the description given of the feretory an aid is provided by the guidance drawing (fig. 4). It will be noticed that it bears a resemblance to a low side-window, making it possible for those outside the building to touch the shrine and to see the Holy Cross when it was exposed for veneration at the saint's tomb. It is uncertain whether the portrait slab was set directly over the grave and angle-wise to the aperture, or set with its long axis at right angles to the line of the kirk wall or alternatively parallel to it. Whatever way it lay, part of it came within reach of the pilgrim's hand. It is possible that previous to the sculptured slab, the grave top took the form of a monumental brass—certainly the style of sculpture on the existing fragments is suggestive of an engraved brass. Within the kirk an altar stood in close association to the feretory, and westward from it there has been mural benching extending along the wall for some distance.

Within the nave, and in close proximity to the window to the west of the feretory, there is evidence of a small doorway slightly more than 5 feet in height, the threshold being at the bench level. This intrusion may possibly be of pre-Reformation date and, if so, it may have been connected with an ambo or outside pulpit from which a priest could address the people assembled in front of the feretory.

In the seventeenth century two roofed-in burial lairs were built against the section of the wall which contained the shrine, and no doubt the removal of the buttress-like projection at the feretory was due to the needs of interment within this special area.

Considering the history and requirements of the building, it is thus clear why the Trinitarians built their domestic buildings on the north side of the kirk when they came to establish their house at Peebles. The structural wedding of the later with the earlier masonry of the north wall of the kirk is easily discernible.

In 1784 the Town Council, at the general desire of the community,

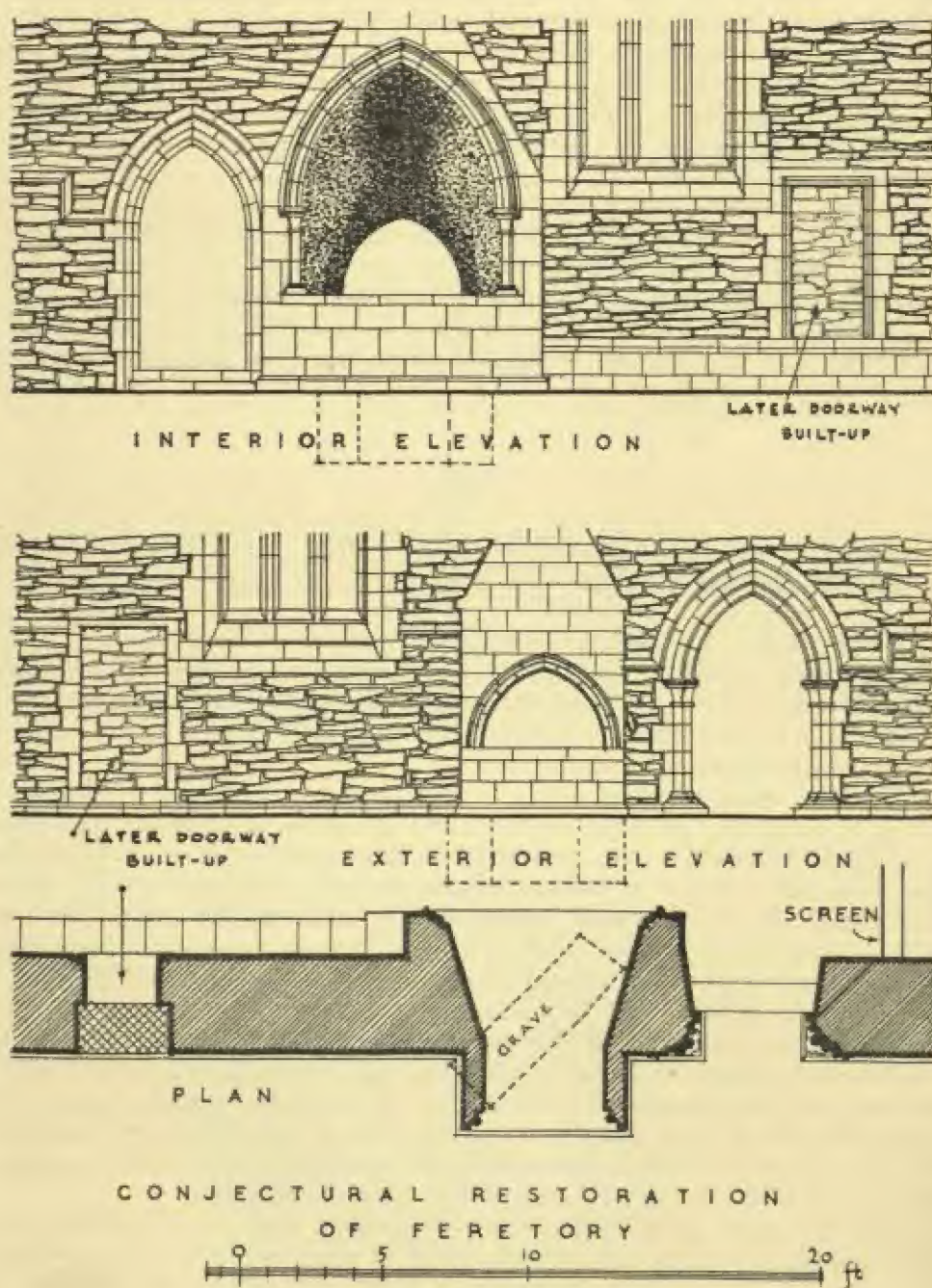


Fig. 4. Elevation and Plan, Cross Kirk, Peebles,
(By courtesy of Ancient Monuments Inspectorate, Ministry of Works.)

introduced an Act whereby "the walls of the Holy Cross Kirk should continue to be kept as a venerable monument of Antiquity". Unfortunately, like many good intentions where ancient monuments are concerned, this laudable desire amounted to nothing, for within a few years much of the fabric, including the feretory, was allowed to fall, and thus what might have been preserved has gone, and what has taken its place in later years provides no clue. The evidence of burning by the English is clearly visible at the doorway next to the feretory. Here the freestone masonry has been split and defaced through heat, therefore we can assume that the shrine suffered similarly, and that it was subsequently repaired to some extent.

The Cross Kirk of Peebles is now under the guardianship of the Ministry of Works, and therefore this communication has been submitted with the approval of the Ministry.

VII.

EXCAVATIONS AT CHESTER HILL FORT, HUNDLESHOPE, IN MANOR PARISH, 1939. BY Miss P. A. M. KEEF, F.S.A.Scot.

Chester Hill is one of a striking cluster of forts overlooking a dry valley of the Tweed in Manor Parish, two miles south of Peebles. It crowns a spur 1000 feet above sea-level of the great mass of Hundleshope Heights, which rise over 2000 feet high at the junction of the Manor Water and the Hundleshope-Haystoun valley.

"Chester Hill, Hundleshope, . . . is strong by nature, as the spur on which it stands is somewhat isolated, and the slopes from it on three sides are long and steep."¹ The fourth side is the ridge which connects it with the main hill. The Fort itself occupies an oval flattening in the ridge. This flattening is accentuated by apparently deliberate levelling. Its area is 76 acres, and below it the ridge falls away in three narrow terraces before the final steep slope to the valley. In the *New Statistical Account of Scotland* it is described as occupying "a commanding site on a steep conical eminence nearly a mile distant from the entrenchments we have described. The fortifications consist of loose stones piled upon each other and within the last 20 years were upward of 5 ft. high." A mediæval hoard of coins was found near the Fort.² The Fort is well situated just above the cultivable boulder clay of the valley, and on soil that would maintain mountain sheep. Lead mines lie on the further side of Hundleshope Heights.

The only signs of defences before excavation were a few low irregular banks standing less than 2 feet high, except in a few places where the natural rock rises up, giving the appearance of walls. No ditches were visible at

¹ Christison, in *Proc. Soc. Ant. Scot.*, vol. xxi. p. 28.

² O.S. map.

Plan of
CHESTER HILL FORT
HUNDLESHOPE
NEAR
PEEBLES

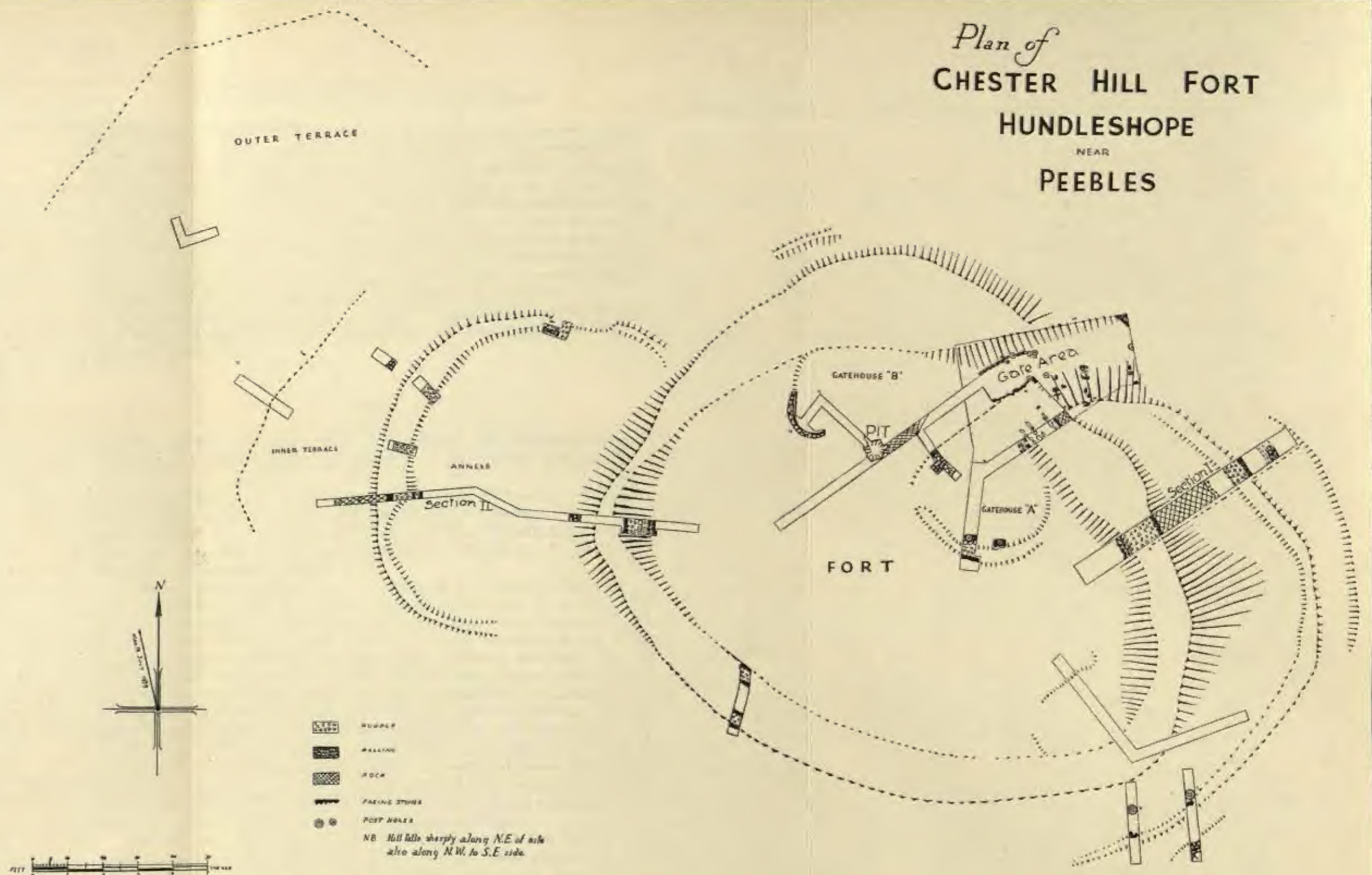


Fig. 1. Plan of Chester Hill Fort.

all, nor the outermost rampart wall. On the other hand, two huts and two gatehouses were clearly marked by banks. On the side of the steepest slope no surface indication of a rampart existed. A hole, thought at first to be only the result of stone-digging, turned out on excavation to be a drainage pit. The site was occupied by a pine wood, which seriously complicated the excavation. The curious shapes and positions of the



Fig. 2. Chester Hill Fort: enlarged plan of gate area.

excavated area, as shown in the plan (fig. 1), are due to the position of trees, and many problems had to be left unsolved as trees were growing in critical places.

Operations were directed to determine the arrangement of the entrance, the position of which was superficially visible, the structure of the defences, and of the huts inside the main enclosure. The rampart, and floors of an annexe on the west, and of terraces beyond it, were also examined.

Entrance.—The entrance (fig. 2) was clearly marked by a gap in the rampart on the east. At the gateway the rampart was robbed down to the foundations. It was apparently formed of a rubble core revetted inside and out with large stones, which were found at places appropriate for such facings. The entrance passage through the rampart is faced on the south

side with large irregular stones arranged with the flat side outwards (Pl. XIV, 1, 2), while the core itself is tied with large bond stones in the manner of a modern dry-stone dyke. This revetment stood 4 feet high, the best piece of walling exposed. The revetment terminates on the east in a massive corner-stone, a boulder of igneous rock, foreign to the site, so arranged that a groove on its face (perhaps artificially deepened) provides additional support for the gate-post. The socket for this gate-post (Pl. XIV, 4) lies immediately to the north of the corner-stone.¹ It is framed with interlocking stones, one of which extends under the rampart revetment so that its weight holds down all the stones. The interspaces between them are occupied with wedge-stones, driven in after the others were in place, to secure them in accordance with a system still current in the district under the local name of "pegging." The corresponding post-hole on the north side of the gate is made in the same way, but is deeper (Pl. XIV, 5). Two slabs found superimposed immediately behind the post-hole seem to represent the counterpart of the monolithic corner-stone.

Another pair of post-holes was discovered east of the foregoing and not continuing the line of the fairway through the ramparts, i.e. turning sharply to the right instead (Pl. XIV, 3). These post-holes are shallower than the inner ones, and the stones framing them are not interlocked, though one is pegged. As shown in the plan, a hornwork built out from the rampart on the north side of the gate connects the outer post-holes with the inner.

The fairway between the gate-posts is 9 feet wide, and is not cobbled, but made of trodden earth² with a few flat stones in it. Across the threshold were found inset in their original position three flat slabs 5 feet long (Pl. XIV, 2) of local stone.³ They had been placed side by side, with their length across the gate, and, when lifted, turned out to be 1 foot thick. Nothing was found under them. At their north end they were all tied down by a billet-shaped stone across their whole width.⁴ To the south the paving was continued by a series of small stones, laid touching one another, and a final slab that partly underlies the south wall. The three threshold slabs are interlocked like the stones framing the post-holes. Thus the wall's weight keeps the slabs in place.

The road up to the gateway was traced in two trial trenches dug outside the entrance. At each cut it proved to be 9 feet wide, and its surface was of trodden subsoil. In both trial trenches it ran in a hollow between the

¹ When found this post-hole was covered with a rock splinter and the hole itself left empty, suggesting that it had been deliberately alighted.

² The local subsoil becomes compacted under pressure, giving a hard surface suitable for paths and floors.

³ Millstone grit.

⁴ It seems likely that the gate itself stood over these slabs, the presence of which would prevent illegal entry by digging under the gate.



1. View through gate (represented by pole) into camp interior.



2. Gate area, showing original walling, threshold slabs, and south inner gate post.



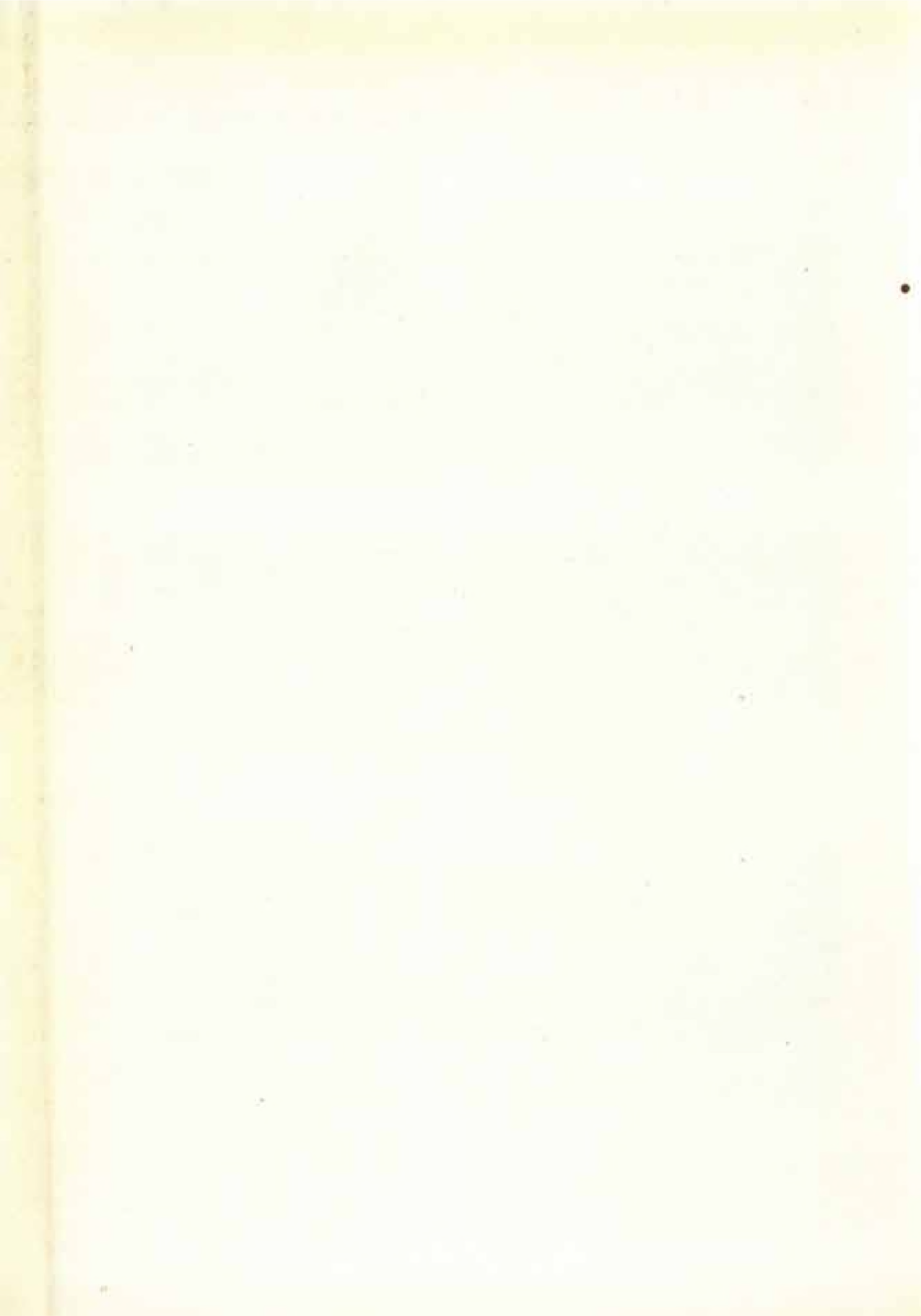
3. South outer gate post-hole.



4. Enlarged view of south inner gate post-hole.



5. Inner gate post-hole, north side.



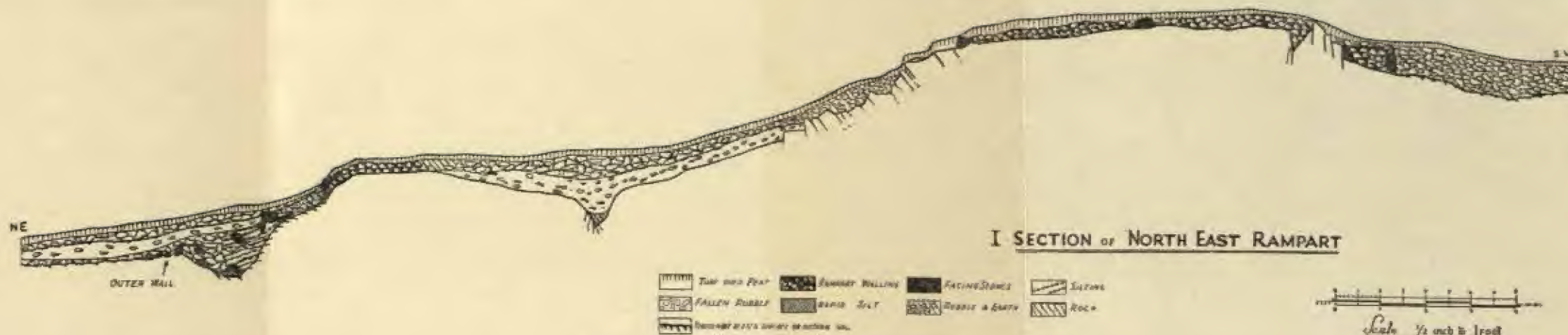


Fig. 3. Chester Hill Fort: Main and Outer Ramparts.

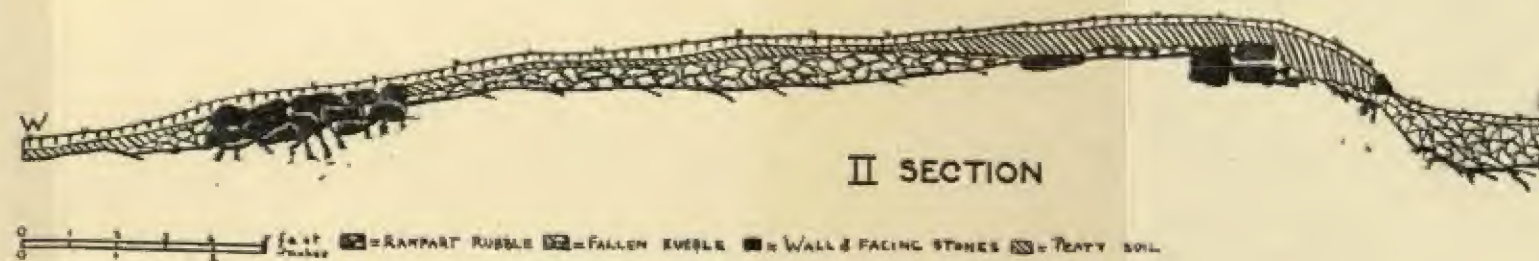


Fig. 4. Chester Hill Fort: Main South-west Rampart.

overlap of the north rampart and the ends of the defences of the east rampart. The width of the crossing over the ditches could not be determined in the time available.

The road approaches the gateway obliquely, mounting steadily till at the gate it turns sharply to the left and levels out, rising again as it enters the camp. It was difficult to follow the road inwards beyond this point, as trees were growing close together over all the suspected line, but its continuation may be defined by a wall running side by side with the wall of gatehouse A (see plan), and seeming to carry on the line of the south revetment of the gateway.

Defences.—South of the gate the defences were found to consist of an inner rampart 20 feet wide, a rock-cut ditch, an outer rampart, and an outer ditch dug in the subsoil with a free-standing wall beyond it.

The inner rampart, reduced to footing-stones, consists of a rubble core with built faces. The inner face follows a rock ridge that has been quarried away to enhance the height of the face. The latter seems to be double. The outer face is set back 4 feet from the edge of the outer ditch. The inner ditch has been almost entirely cut in the solid rock by splitting the stone along natural cleavage planes, leaving jagged edges (fig. 3). The outer rampart has been built on an earth surface. Its inner face, if any, had been entirely robbed, but, on the outside, a wall of large stones supported a rubble core. Between this revetment and the inner lip of the outer ditch is a berm 4 feet wide on which lay stones that had presumably slipped from the rampart. In the bottom of the outer ditch were found lying big stones from the face of the outer rampart and the outside wall. These lay on a small deposit of rapid silt that had accumulated while the defences were in use. Beyond the ditch were traces of a counter-scarp wall, represented only by footings consisting of large, carefully chosen stones, most of which had been pushed back into the ditch about the same time as the facing-stones from the outer rampart. Doubts as to the existence of the wall were, in fact, only removed after it had been found again, better preserved, in the section in the south corner (see fig. 1).

On the south-west, the main or inner rampart was tested in two places (figs. 4, 1). Prolonging the central trench southward we exposed an area of rock, studded at intervals with large stones, the southward of which should represent the south-west rampart, but this was here too far ruined for the construction to be discernible. To clear up the question the adjoining trench was extended southward, and here the rampart was quite clear, standing three courses high and 5 feet wide. Eight feet further south we exposed the footings of a second wall, also 5 feet wide. The earth in the space between the walls has been trodden hard. It was covered with a thin layer of rubble. We found no ditch outside this rampart, but the hill slopes steeply down beyond it. A second strip of

rampart was exposed outside the first, but only the foundations of the rubble core survived.

Further west the same rampart was exposed in a trench dug to determine the nature of the Fort's floor. Here the floor consisted of trodden subsoil and sloped up towards the rampart as in the east. As there, the rampart rested on the rock and was about 10 feet wide. It consisted of a rubble core faced on both sides with large stones. Outside this face compacted subsoil sloped steeply down to the annex floor, the slope being covered with a layer of rubble. At the point where the slope reached the annex floor another wall was found running parallel to the rampart at the top. It was built of large irregularly shaped stones, set about 9 inches deep in the earth. In two places handfuls of subsoil had been put between the stones, like mortar. Outside this rampart no trace of a ditch could be found, though two trial trenches were sunk in the annex to look for one.

In the south-east corner of the Fort a trial trench disclosed a platform of rubble standing slightly above the general level of the camp floor, but thinning out as the rock rose to its surface. Where the rubble packing ended trodden earth appeared.

At this point was a layer of rubble which began inside the line where the rampart would be expected, but continued outward, roughly to where the rampart's outer face would have been. No facing stones, however, came to light. Continuing the trial trench south-east beyond the presumed face we exposed a trodden earth surface. On it, just beyond the presumed rampart, we found two heaps of fallen rubble, and beyond these a cobbled surface. The heaps and cobbling occupied the area where the inner ditch was to be expected, but no ditch was traceable. Owing to standing trees this trench could not be continued in the usual way to the position of the outer defences; instead, two trial trenches were dug 18 feet further south. The more northerly of these exposed a narrow outer rampart and a tiny ditch beyond it. Beyond this ditch was a well-built free standing wall slightly sunk in the earth, with earth between the stones like mortar. A similar outer rampart was exposed in the southerly of these two trial trenches, but no ditch. Two large post-holes, dug after the erection of the outer rampart, were encountered (see plan, S.E. corner). The first hole had been dug into the rampart bank on the inner side, down to the solid rock. The second post-hole was pegged, and lay not directly behind the bank, but on the line of the inner ditch; not however in the filling of that ditch, for we found no trace of a ditch in this section. In both post-holes the soil was black and contained charcoal, as in the annex.

Interior.—A trial trench across the main Fort floor from the gateway showed that the open floor of the Fort was carefully levelled and drained. The rock was levelled away where it was too high, and was built up with earth where necessary. This levelling terminated in a row of set stones

just above the pit or drainage sump that lies a few yards inside the gateway. On the gateway side of the pit the rock came to the surface and divided the incoming roadway, so that the main road turns to the left on entering the gate from one side.

The sump was cut 4 feet deep into the rock and was square-bottomed. It lies at the lowest point of the Fort interior. At first it was thought to be some sort of cistern—and no doubt, if it was urgently needed, a skin lining would convert it into something that would serve the purpose—but as it was not found lined with clay, nor was it a spring, it seems more likely that it was a drainage sump for rain-water. In that capacity it acted splendidly, for during the week that the guardhouse and hut floors were open, though the weather was rather wet, the water never stood on these floors, nor did the Fort floor become swampy, but the water seeped into the drainage pit. The pit was found filled with soil of one colour that appears to have washed in over a small amount of rapid silt. The rock in which the pit was cut, and the rock between it and the roadway, was very much weathered and split as though by frost. Two ruined huts within the Fort seemed on investigation not to be ancient.

Gatehouses.—The wall of gatehouse A was robbed down to the footings. Its plan was roughly circular. The wall was reinforced on the inner face by post-holes set at intervals of about 9 feet. The earthen floor comes up to the posts. No trace of a central post-hole was found, nor of a hearth. Gatehouse B balances gatehouse A on the north. It was partly excavated in the rock; only the footings of wall remained in a few places and no post-holes were observed in the walls, nor hearth. The wall was partly founded on the rock, which slopes away towards the sump. No wall interrupts this slope, and a rock gully leads down into the sump, presumably to keep the floor dry.

Annex.—The floor of the area thus labelled, as revealed by a long trial trench, was of trodden earth. The rampart bounding the area rested on the rock, and was of the same width as the main inner rampart. An inner revetment face was exposed in this section and at the north-west corner. Below the revetment the natural rock sloped downwards, and was covered with a thin layer of rubble in which some large stones were set. No wall was observed at the base of this slope, nor yet any ditch, but the terrace below showed traces of occupation, *i.e.* a patch of cobbled surface. On the west the annex rampart had evidently been disturbed and was therefore not examined, but it may mark the site of a gateway. The small trial trenches revealed the rubble of the rampart only here.

Inner Terrace.—Outside the annex trial trenches revealed a cobbled surface of subsoil extending from the edge of the annex rampart. This cobbling continued to the edge of the terrace, where the rock outcropped and sloped down to the outer terrace. In the main trench we uncovered a

wall constructed like the top wall of the annex rampart. In both trenches there was dark ashy earth over the cobbling, suggesting occupation.

Finds.—No finds were made in the whole excavation, with the exception of two specimens of the mineral, crocoite or lead chromate, found at the gateway and at the east end of the Fort amongst rubble in both places, and unstratified.

Beacon.—Ninety feet south up the ridge from the Fort was a circular depression in the ground. It had the appearance of a sunk hut floor. One would think some look-out post would be necessary on that spot, as from there, and from there only, a clear view can be obtained both of the Fort interior and the ridge. However, two cross trial trenches disclosed no walling round the hollow and no flooring. The depression had been sunk into the rock, and the rock itself showed signs of having been very extensively burnt, in places to several inches below the surface. No remains of any industry were found. The inference is, I think, that the place had been used as a beacon. A fire there would be seen by the forts across the Tweed Valley, but would be invisible across the Border.

But there was nothing to connect this beacon pit with the Fort. Fire on such a large scale could only have been used before the planting of the trees in the early nineteenth century. The beacon may occupy the site of a little guard hut or something of the sort, and have burnt out all traces of the earlier building. On the other hand, it is tempting to postulate Chester Hill Fort as the fortified dwelling of the beacon tenders.

Conclusion.—There was no object found that could be dated. However, we were able to see exactly how the camp had been built, and were able to consider it of the Scottish Iron Age, probably after the arrival of the Romans in Britain. The place was roughly circular, and had a double rampart round three-quarters; on the fourth quarter were the bottom stones of a rampart, but, as there was no fallen stone at all, I do not think that it was ever finished—especially as, outside it, ran very large holes for posts. Of these we only had time to find two, but there was no doubt of their direction. The only earth we found containing ash or charcoal was outside the walls, on a natural terrace below. The earth inside the camp was quite clean. I was forced to think that the place, being on a hilltop, was built quickly at the approach of some enemy; that the walls could not be finished in time and so the fence, represented by post-holes, was built at that point instead; also that it was put out of action by the enemy, as we found the gateway filled up with stones right down to the entering road surface, showing that it had been filled with stones while it was still in use, and the main post-holes slighted. The gateway was in a very good state of preservation.

Edgerston Fort, in the same neighbourhood, shows post-holes along the interior wall face of huts, like Chester Hill's gatehouse A.

The excavation of Chester Hill Fort was undertaken in connection with a regional survey of the Manor Water district. Another type of dwelling-site, of presumably different date, was investigated at the same time by Mr R. B. K. Stevenson, M.A., F.S.A.Scot.

For permission to excavate I should like to thank the owner of the site, Sir Duncan Hay, Bart., of Haystoun. The grant of money made for the enterprise by the Society of Antiquaries of Scotland I am most grateful for. It was supplemented from private sources, which prefer to remain anonymous but to whom I am no less grateful. I should like to express my indebtedness to the volunteers for their gallant help in all weathers, especially to those who came a great distance to assist us. I must acknowledge also the enthusiasm of the workmen employed on the site.

The plan of the site was most kindly undertaken by Mr A. H. A. Hogg, M.A., A.M.I.C.E., and Mr S. Cruden, M.A., F.S.A.Scot. For advice and information I must thank Dr Steer and the late Mr Edwards. Professor Childe kindly read this paper.

VIII.

THE INAUGURATION OF ALEXANDER III.

By Miss M. D. LEGGE.

Read January 14, 1946.

The history of the knowledge of the French language in Scotland may be conveniently divided into four periods: Early Mediæval, "the Edwards in Scotland," the Auld Alliance, and modern times. Of these, the third is naturally the best known; the first is hardly known at all. Yet the unfortunate term "Norman-French" occurs sufficiently often in record publications to warrant an investigation. Meantime there is one small but cherished piece of evidence which can and must be exposed as a piece of fiction.

"The Bishop of St Andrews," wrote E. W. Robertson,¹ "at the coronation of Alexander III translated the Latin formulas into French, a useless expenditure of trouble had not that been the language with which the youthful prince was best acquainted." And George Grub points a moral when telling the same story²: "At the coronation, that language alone was

¹ *Scotland Under Her Early Kings* (Edinburgh, 1862), vol. II. p. 143 n.

² *Ecclesiastical History of Scotland* (Edinburgh, 1861), vol. I. p. 326.

wanting, which was spoken by the most influential of Alexander's subjects, and which was soon to be predominant throughout the kingdom." Both these writers belong to an elder generation of historians, but their works are still read, and this particular legend has become generally accepted and is being repeated even in our own day.¹

On the face of it the story is not impossible. Alexander was only eight, and his mother was a Frenchwoman. Robertson gives his authority for the details of the coronation, and he states it to be Fordun.² At Scone, according to this source, the Bishop of St Andrews anointed the boy, girded him with the sword of knighthood, administered the oath to him "*prius Latine postea Gallice*," and crowned him in the Abbey church before leading him outside to the Stone, where he received the homage of the nobles, and a Highlander recited the traditional pedigree in Gaelic, as depicted in the famous miniature in Corpus Christi Cambridge MS. 171.

Unfortunately, his source was not the real Fordun, and the growth and flourishing of this legend are proof of the need for critical texts, and for the minute scrutiny of the details from which a general historical picture is made up. What Robertson cited as Fordun is what is commonly called the "*Scotichronicon*," Goodall's edition of 1759, which is Fordun rewritten by Bower. Until Skene published the first volume of the *Historians of Scotland* in 1871, this was the only easily accessible text of the chronicle, and indeed for some purposes it has never been superseded. Skene disentangled Fordun from later accretions, but Andrew Gillman's intention of producing a critical text of these accretions never bore fruit, and one is still awaited. In 1869 Skene had already printed in parallel columns the account as Fordun had left it in 1385 and as Bower had recast it in 1447, in an appendix to his treatise on the Coronation Stone.³ Further criticism of Bower's trustworthiness as an historian may be found in Sir H. Maxwell's *Early Chronicles Relating to Scotland*.⁴

It must be remembered that even Fordun was writing more than a hundred years after the event, and that no records are extant by which his account can be checked. It is true that Sir James Balfour possessed what purports to be an account of the coronation, but Lord Bute was probably right in dismissing this as late invention.⁵ Balfour has been called "one of our most industrious antiquarians, but, alas! also one of our least trustworthy."⁶ It is hardly possible that he could have inherited, as Lord Lyon, any written record of such antiquity, and he may have

¹ E.g. J. Fergusson, *Alexander III* (London, 1937), p. 28; Agnes Mure Mackenzie, *The Foundations of Scotland* (London and Edinburgh, 1938), pp. 107, 219.

² *Op. cit.*, vol. ii. p. 54.

³ Edinburgh, 1869.

⁴ (Glasgow, 1912), pp. 231-4.

⁵ John, Third Marquess of Bute, *Scottish Coronations* (Paisley and London, 1902), p. 67.

⁶ J. Maitland Thomson, *The Public Records of Scotland* (Glasgow, 1922), p. 130.

derived the account from a chronicle. Maidment published it in 1837,¹ but Balfour may not have regarded it as authentic. It has every appearance of being an inflated version of Bower.

Fordun's account does at least make sense. It was, as Skene was desirous of showing, the last traditional inauguration of a King of Scots. Everything took place out of doors. The Bishop of St Andrews "consecrated" the King, whatever that may mean, but the essential act, as Fordun expressly points out, was the placing of the King upon the Stone. This was followed by the homage and the recital of the genealogy by the Sennachie. In fact, it reads like an account of the old tribal inauguration blessed by the presence of a bishop. All the available lore of the rite was summed up in the form drawn up for Charles I's coronation by the then Lord Lyon, Sir Jerome Lindsay of Annatland, which was not adopted. This form² is sufficiently like other Western coronations to be misleading at first sight. Crowning, anointing, and so on have become an integral part of the ceremony, and the Stone is absent. But certain peculiarities survive: the inauguration is still there, and the Lord Lyon has inherited the Sennachie's office of genealogist.³ The ceremony has become an amalgamation of the tribal inauguration conception and the Christian and feudalised coronation. The process of this amalgamation and assimilation was gradual: it is difficult to trace the exact stages by which it was accomplished. In the time of Alexander III it had hardly begun.

One of the main differences between Fordun and Bower is that the former recognised the fact that Alexander, the last King of the old line, was likely to come to the throne with an old-fashioned ceremony, while the latter did not. This, however, was not the only reason why both Fordun and Bower thought it necessary to describe this inauguration in detail.

It was the first, but not unfortunately the last, occasion on which the heir to the throne was an infant. In former times, the age at which a king could assume personal government was not fixed, and varied according to the circumstances. In Britain it was sometimes as early as fourteen, sometimes as late as twenty. Conditions made it advisable to consider James V as being of age at twelve, though he remained in semi-tutelage for two further years. Alexander, however, was only eight. Apart from the obvious inconvenience of this fact, both Fordun and Bower were steeped in English history and doubtless intended their books to be read abroad, where Alexander's accession would excite more interest than it did at home. "Woe

¹ *Ancient Heraldic and Antiquarian Tracts* (Edinburgh, 1837), p. 32. Cf. *Nat. Lib. MSS.*, 33.2.26, 33.7.10.

² *Register of the Privy Council of Scotland*, Second Series (1627-8), vol. ii. p. 393 ss.

³ See the article on "Heraldic Law" by Thomas Innes of Learney, Albany Herald, in *Sources and Literature of Scots Law* (Stair Society, 1936), pp. 381-3; also his chapter in "The Times" book, *Crown and Empire* (London, 1937), and "Diploma of Nobility for De Landa," *Juridical Review*, vol. III., No. 3, p. 181. Cf. "Heraldica," "Heraldry and War-Leadership," *Notes and Queries*, August 15, 1942, p. 92 ss.

to the land where the King is a child" was a text quoted with real meaning in the Middle Ages. The principle of primogeniture was only slowly establishing itself. It was not long since John had successfully placed himself on the English throne, and few were found to urge the claims of his nephew Arthur. The Capetians down to Philip Augustus took the precaution of crowning their eldest sons in their own lifetimes,¹ an extreme form of Tanistry which was copied by Henry II in the case of the son known for ever as the Young King. The situation in Scotland was not so dangerous. According to Fordun, the Royal order of succession had been clearly laid down on a new principle, that of nearness of blood, by Malcolm MacKenneth (1005-34).² Express mention is made of the fact that a babe a day old was not to be excluded. Thus both Alexander III and, what is much more remarkable, the Maid of Norway were held to be the undisputed heirs of their father and grandfather respectively, though it is perhaps only fair to add that there was no one near enough in blood to feel a grievance, and the principle had often been violated in early times.³

Alexander, then, succeeded to the throne. The next difficulty which had to be faced was that of his inauguration. Elsewhere, it had not yet been determined whether a king began his reign from the moment of his accession or only from that of his coronation. In France, for this reason, coronations of minors came to be deferred until the close of the Regency, and the early age of fourteen was fixed for their majority. In spite of the efforts of successive kings to break the tradition, it held good for the last coronation of a minor, that of Louis XV, which was delayed for seven years.⁴ In Spain there is a faint possibility that Enrique III of Castile had two coronations, one after his accession and another when he came of age.⁵ In England the problem was soon to present itself in a peculiar form. Edward I was abroad when his father died, and there was no possibility of an early coronation, but he was of age and the succession was not in dispute. It was therefore decided to date his reign from his father's funeral.⁶

There was, therefore, every reason why Alexander should be proclaimed King as soon as possible. It was the traditional thing to do, and it would have a steadying effect both at home and abroad. However, yet another difficulty arose. Alexander had neither uncle nor great-uncle who could be associated with him,⁷ and a quarrel about who was to govern in his name was

¹ A. Luchaire, *Histoire des Institutions monarchiques de la France sous les premiers Capétiens*, 2^e édition (Paris, 1891), lib. i. cap. 11.

² Fordun, vol. i. p. 172; vol. ii. p. 164.

³ Cf. *Crown and Empire*, p. 90, and the Introduction to the translation of Skene's Fordun.

⁴ See especially M. Menin, *Treatise of the Anointing and Coronation of the Kings of France* (English trans. London, 1723), and D. Godefroy, *Le Cérémonial François* (Paris, 1649).

⁵ M. D. Legge, *Anglo-Norman Letters and Petitions* (Oxford, 1941), p. 184.

⁶ Rishanger's *Chronicle* (Rolls Series), p. 75; cf. Stubbs, vol. ii. p. 111.

⁷ For the question of minors and joint-reigns, see Thomas Innes of Learney, *The Tartans of the Clans and Families of Scotland* (Edinburgh and London, 1938), p. 47, n. 4.

a foregone conclusion. The chief rivals were Comyn and Durward. According to Fordun, Durward tried to postpone the inauguration, saying that the boy must first be knighted, and that the knighting could not take place at once, because the day was unlucky. Comyn suspected him of wishing to knight the King himself, which would automatically have made him appear the most important person present, and he declared that "he had seen a king consecrated who was not yet a knight and had many a time heard of kings being consecrated who were not knights." This argument carried the day, and Alexander was straightway led outside to the Stone. The ceremony already described followed. Bower diminishes the part played by Comyn, and says that the quarrel was settled by the Bishop of St Andrews knighting the King. There are two points of interest here: the first, why the question of knighthood was raised; the second, why Fordun and Bower differ.

The exact relationship between knighthood and kingship has never been defined, and of course kingship is immeasurably the older conception. The ceremonies of knighthood and coronation are, however, so alike that confusion was inevitable. Moreover, as chivalry ceased to become a real thing and became more and more the conventional framework of society, it would have been awkward if the King could not take his place as *primus inter pares* with his fellow-knights. So, in writing of the fourteenth century, Sir James Ramsay goes so far as to call knighthood an "indispensible preliminary" to coronation.¹ Now, as will presently appear, this association of knighthood and coronation seems to have been well on its way to being an accomplished fact in the thirteenth century, and if the matter was really brought up in the case of Alexander III, it shows that men were beginning to think of the Scottish inauguration as a feudal ceremony, feudal, that is, in the Anglo-French sense.

Few minors, at least in early times when the knight was first and foremost a fighting-man, had been knighted, and in the case of princes delay was sometimes caused by the fact that it was customary, though it never became obligatory, for a future king to be knighted by a reigning monarch. Comyn appealed to history in support of his contention that a king could be consecrated before being knighted. Only one such case in Scottish history would be known to him. He, or Fordun, was probably thinking of Malcolm the Maiden, who was knighted by Henry II at or near Tours six years after he became king.² Alexander II was only sixteen when he came to the throne, but he had been knighted by John at Clerkenwell two years before.³ Curiously enough, both Alexander III's contemporaries in England and

¹ *Genesis of Lancaster* (Oxford, 1913), vol. i. p. 184.

² *Fordun*, vol. i. p. 255; vol. ii. p. 250.

³ *Cal. Docs. Rel. Scot.*, vol. i. p. 90 (No. 518); cf. footnote, p. 134, to M. O. Anderson, *Chronicle of Holyrood* (Scottish History Society).

France had come to the throne as minors in troubled times, and in both cases the question of knighthood was raised and settled in a way that was hardly helpful to Comyn. According to one chronicler, whom there is no reason to doubt, a halt was made on St Louis's journey to his coronation at Rheims so that he could be knighted at Soissons.¹ And in spite of the obvious dangers, Henry III's coronation was delayed so that William Marshal could knight him. This detail is not of record, but is reported in the Marshal's life, which is good authority.²

It was indeed best to ignore the circumstances of Henry III's coronation at Gloucester, for they were considered so irregular that he had to undergo the ceremony a second time at Westminster with a real crown.³ This marks an interesting distinction between the Scottish and English ceremonies. In Scotland, however inadequate the inaugural ceremony may have appeared to foreigners, it remained a proclamation of the fact of accession, a fact which no circumstances could alter. In England, when Richard I purchased his release from a humiliating captivity by doing homage for his kingdom to the Emperor, it was felt necessary to wipe away this disgrace by a second coronation.⁴ But the question of a second coronation could not and did not arise in the case of William the Lion, nor did it in the later case of David II, and it was only mistrust that inspired Parliament to require him to renew part of his coronation oath.⁵ Neither the Bruces nor John Baliol could be described as men steeped in Scottish tradition, yet there is evidence that they were influenced by it. It is clear that the two principal claimants took expert advice when their claims were prepared in 1291-2, for both claims were based on different interpretations of Scottish custom. Tradition may account for what appears to be a genuine difference of opinion which both Robert I and John Baliol had in turn with Edward I on the sanctity of the Scottish coronation. To Edward, this was an empty form, to be disregarded at will; to the others, an irrevocable act, a kind of sacrament, after which their views on their position and dignity were never the same again. If any explanation other than that of convenience is needed for the fact that Mary in her own person is sometimes described as "the Princess" even after her coronation to distinguish her from her mother,⁶ it is probably to be found in the strong French influence naturally prevailing at that date.

When all these factors have been considered, it will be seen that Fordun's account of Alexander III's inauguration rings true—the accession, the

¹ *Willelmi Chronica Andreensis, Monumenta Germanica, Scriptores*, vol. xxiv. p. 766.

² *Histoire de Guillaume le Maréchal*, ed. P. Meyer (Paris, 1891-1901), II. 15308 and following.

³ *Walter of Coventry (Rolls Series)*, vol. II. p. 214; cf. P. E. Schramm, *History of the English Coronation*, tr. L. S. Wickham-Legg (Oxford, 1937), pp. 39, 44-5, 59, 163-4.

⁴ *Matthew Paris, Chronica Majora (Rolls Series)*, vol. II. p. 404; cf. Schramm, *op. cit.*, pp. 58-9, 234-5.

⁵ *E.g.* in the *Lord High Treasurer's Accounts*.

⁶ *Acts Parl. Scot.*, vol. I. p. 134.

proposal to inaugurate, the objection based on newfangled ideas and its rejection, and the ceremony based on Celtic tradition of immemorial antiquity. Skene held that Bower deliberately substituted a coronation of the conventional type. If this is so, it is not necessary to be too hard on Bower. In his day, the great anointing controversy had at last been settled, the Stone was at Westminster, and the Scottish monarchs were now crowned with rites which superficially at least closely resembled those in use in England or in France. Bower may have been desirous of enhancing Alexander's position as an independent monarch by representing him as having been crowned in this style, or he may simply be guilty of anachronism.

The possibility that Bower may have been using sources which have since disappeared with so many other records cannot altogether be excluded, but, for reasons which have already been given, Fordun's account is to be preferred in the light of what we now possess. A possible clue to his sources is provided by Bower himself. If he wished to give a conventional picture of a king being crowned, he would of course try to get rid of any suggestion of irregularity and, as Abbot of Inchcolm, he would tend to stress the ecclesiastical side of the ceremony. And this is what he seems to have done. Fordun barely mentions the Bishop of St Andrews, while Bower assigns him an important part. Bower describes the knighthood controversy, but says that it was settled not by Comyn but by the Bishop.

Time had provided Bower with a number of precedents to supplement his imagination. He himself relates the knighting of two later Scottish boy-kings. David II is said to have been knighted at his coronation by the Guardian, and to have himself immediately knighted the Earl of Angus and young Randolph.¹ David's own knighthood is not of record, but that of the others is,² and may be deemed to postulate the King's. James II had been knighted with his elder twin brother at their baptism.³ This detail is not of record, but Bower is here contemporary, and this was probably the current practice. Apparently James I received knighthood at the hands of Henry V in 1421,⁴ but the fact that he was then received into the Order of the Garter does not really rule out the possibility of his being already a knight. In the very full account (based on a contemporary broadsheet) of the baptism of Prince Henry at Stirling in 1594 in Nisbet's *System of Heraldry*,⁵ it is said that he was dubbed knight by the King, and was touched with the spur by the Earl of Mar immediately after his baptism and before the ducal crown was placed on his head. The Lord Lyon then proclaimed his style.

The idea of knighting a prince at his baptism is believed to have originated in France. Enguerrand de Monstrelet declares that Louis XI was

¹ Goodall, vol. ii. p. 302. ² *Cal. Exchequer Rolls*, vol. i. p. 398. ³ Goodall, vol. ii. p. 490.

⁴ E. W. M. Balfour-Melville, *James I., King of Scots* (London, 1936), p. 84.

⁵ Vol. ii., ed. Robert Fleming (Edinburgh, 1742), p. 101.

knighted at his own request just before his coronation: "Qi fut vne nouvelle chose Car lon dist comunement que tous les filz des roys de france sont cheualiers sur les fons a leur baptesme."¹ Monstrelet's authority for this assertion is not known.² Nisbet (*op. cit.*, p. 87) says: "And tho' it is said the Sons of the French King are Knights as soon as they receive Baptism, yet are they not judged worthy of the Kingdom, unless first solemnly created; and we elsewhere find that the Royal Heirs of Aragon were suspended from the Crown, until they had received the Honour of Knighthood." This refers to the fact that later Kings of France were received into an Order of Chivalry at their coronation. It should be noted that Louis IX, whose knighting is mentioned above, was only the grandson of a King of France. Before leaving this subject, Arthur Young's contemptuous reference to the Cordon Bleu as a blue slobbering bib may be recalled.

In England, this association of knighthood and baptism seems never to have taken hold. Nevertheless, Bower had two examples to consider. Edward III came to the throne unexpectedly early, on his father's deposition, and he was knighted before his coronation by either his cousin, Henry of Lancaster, or John of Hainault.³ The future Richard II had been created a Knight of the Garter shortly before the death of Edward III, as part of the campaign by Gaunt's enemies, it is interesting to note, to ensure his succession to the throne.⁴

Bower, however, preferred to make the knighting an integral part of his coronation. The Bishop of St Andrews, he says, knighted the King "*ad modum Willelmi Rufi regis Angliæ, militaribus insigniti a Lanfranco Cantuarie Archiepiscopo, et ab eodem coronati: pro quo vide supra, Lib. VII. cap. xxxj. et infra cap. iv.*"⁵ The source of both Fordun and Bower for the reign of Rufus is William of Malmesbury (known to Bower through the medium of Helinandus), whence this detail is derived. When Bower comes to the actual knighting of Alexander by Henry III he is fain to explain away the earlier ceremony. As a matter of fact, he was right upon both counts, only he cannot have it both ways. It is true that the higher clergy could and did make knights,⁶ but it is also true that the coronation sword is not the sword of knighthood, though they are similar in origin and in symbolism. The former plays its accustomed part in both England and Scotland at the coronations of infants and Queens Regnant.

¹ Verard's ed. (Paris, sixteenth century), vol. ii, f. ccxviii.

² Selden, *Titles of Honor* (2nd ed. 1631), p. 548.

³ Walsingham (Rolls Series), vol. i, p. 188; Bridlington, *Chronicles of Edward I and II* (Rolls Series), vol. ii, p. 95.

⁴ Walsingham, vol. i, p. 326.

⁵ Goodall, vol. ii, p. 81; cf. vol. i, p. 409, vol. ii, p. 84.

⁶ See not only Malmesbury (Rolls Series), vol. ii, p. 300, but the *Cambridge Medieval History*, vol. vi, pp. 801-2, and L. Gautier, *La Chevalerie* (Paris, 1895), p. 265.

Thus it was used at the coronation of James VI, who was one year old,¹ and at that of the nine months old Queen Mary.²

It is therefore reasonable to deduce, from Bower's general tendency and from this cross-reference supplied by himself, that if this version of Alexander's inauguration is his invention, he had the English coronation ceremony in mind. From that he would derive the crowning and anointing, and from that his remarkable statement about the oath. Very little is known about the mediæval coronation oath of Scotland, and what it was like before the insertion of the heretic clause. The part referring to Crown lands is of record in 1357.³ For later records the references were collected by William Bell in his work on the Regalia of Scotland.⁴ The oath was formerly taken in Latin and later in English. Bower's own king, James II, is believed to have taken it in English, for copies of it exist, though none of them is of record. The matter is complicated by the fact that until the Reformation there does not seem to have been a fixed form for the oath. At least that is what Lindsay concluded from the records now lost. "Whill the crowne is on the Kings head the King promises by oath takin by the bishops to be a loving father to the people in the words that the bishops thinkes good. Bot now the forme of oath is sett down be a speciall act of Parliament made be King James of ever blessed memorie, First Parliament, cap. 8." ⁵ Lindsay evidently knew that the oath went back to something belonging to a primitive society. His remark about the "words that the bishops thinkes good" would cover Bower, but a consideration of what was happening in England will strengthen the suspicion that he was looking beyond the Border.

The language of the English coronation oath has been the subject of much recent investigation. Until the last few years the idea that it was administered in Latin, but that a French form available for an "illiterate" king was employed at Edward II's coronation, was generally prevalent. In 1936 Mr H. G. Richardson and Dr G. O. Sayles pointed out that there were no real grounds for pillorying Edward II in this way,⁶ and in 1941 Mr Richardson returned to the charge,⁷ adding that the French form was employed quite as much for the benefit of his subjects as for that of the King, that it was probably in use before 1308, and that the misunderstanding had arisen through the choice of text by the editors of Statutes of the Realm. The fault, therefore, lies with the writer of that text, but he was not alone

¹ *Reg. of the Privy Council of Scotland*, vol. i. p. 542.

² *Hamilton Papers*, vol. ii. p. 39. Cf. for the whole question, Schramm, *op. cit.*, pp. 83-4.

³ Cf. note 20.

⁴ *Bannatyne Club*, 1829, p. 25.

⁵ *Loc. cit.*, p. 394.

⁶ "Early Coronation Records I," *Bulletin of the Institute of Historical Research*, vol. xiii. (1935-6), esp. p. 140.

⁷ "The English Coronation Oath," *Transactions of the Royal Historical Society*, 1941

in mediæval times in his confusion. Mr Richardson and Dr Sayles describe fourteenth-century copies of the coronation service, in which the oath is given in Latin followed by the French version, which was mistaken for a translation of the Latin, whereas it seems to have been of independent origin. At the time when Bower was writing there had been no English coronation for about fifteen years, so that the ceremony would not be fresh in men's minds. If he got hold of some written account, and interpreted, as well he might, some such rubric as "*Translatio eiusdem sacramenti in Gallicum*" to mean that the oath was first recited by the Archbishop in Latin, like the rest of the service, and then actually administered in French, he would naturally be led to say what he does.

It may never be possible to clear this matter up completely, but at any rate there is a case to answer, and Bower cannot be regarded as a reliable authority. Fordun, on the other hand, though he had his faults, stands out as a really great historian. Two major desiderata have enlarged the scope of this textual inquiry: a really sound, full-length history of the Scottish coronations¹ and a comprehensive study of the coronation of minors. The main lesson which emerges is the need for good texts, and for the critical interpretation of texts. A clear distinction is not always drawn between what is matter of record and what is merely matter of report. Had Schramm, for instance, been more careful in this respect, his few remarks on Scotland would have been more acceptable. "What the chronicler said" is not evidence.

Thanks are due for advice in the preparation of this paper to Dr H. W. Meikle, Librarian of the National Library of Scotland and Historiographer Royal, and to Dr Annie Dunlop; and for his suggestions and criticisms to Mr Thomas Innes of Learney, Lord Lyon King of Arms. The responsibility for the views expressed is mine alone.

¹ To the books and articles already mentioned should be added the Rev. Professor Cooper, "Four Scottish Coronations," *Transactions of the Aberdeen Ecclesiological Society* (Special Issue, Aberdeen, 1902), who takes a different line from Lord Bute.

IX.

FIELD WORK IN COLONSAY AND ISLAY, 1944-45.

BY STUART AND C. M. PIGGOTT.

Read February 11, 1946.

I. NOTES ON THE DUNS AND OTHER ANTIQUITIES OF COLONSAY AND ORONSAY. By C. M. PIGGOTT.

In September 1944 I spent a fortnight in Colonsay and was able to visit and make notes on many of the more important archæological sites both in that island and in Oronsay. Mr and Mrs Maxwell-Hyslop were with me, and I would like to record my gratitude to them for their help.

Very little work has been done on the antiquities of Colonsay, except on sites of Mesolithic or Viking date; consequently the relevant literature is small in amount. All the sites noted here have been referred to in one of the three standard books on the islands, but as in each case the primary object of the author has not been to deal with the prehistoric remains, that subject has been somewhat neglected.¹

Apart from the caves and the Viking and Early Christian remains on the islands, by far the most notable group of sites is that of the duns, and these will be described individually where possible. The miscellaneous sites visited will first be noted.

A. Megalithic Sites.

Stones at Uaigh an Fhomhair, Kilchattan.

On a small level area on the south-western slope of Carn Mor, overlooking Dubh Loch and the bay below Kilchattan, is a setting of stones planned in fig. 1 and known as Uaigh an Fhomhair (The Giant's Grave) (Loder, p. 11, with photograph on pl. xvi). Without excavation it is difficult to interpret, but the remains do suggest some form of ruined passage-grave with a chamber 5 feet across and an approach passage 10 feet or so long (Pl. XV, 1). The stones surrounding the "chamber" area are laid flat as if the lowest course of walling, and are

¹ The following books are valuable for use in the study of Colonsay prehistory:—

Colonsay and Oronsay in the Isles of Argyll, by John de Vere Loder (1935). Fully documented, and with the first two chapters on the pre-Norse remains. It contains a most useful map, specially prepared by Mr Loder, with a scale of 2½ inches to a mile, and contours coloured in 50-foot intervals.

Book of Colonsay and Oronsay (2 vols.), by Symington Grieve (1923).

Colonsay, by Murdoch McNeill (1910).

See also *Proc. Soc. Ant. Scot.*, vol. xv. (1880-81), p. 113: Stevenson, "Antiquities of the Islands of Colonsay and Oronsay."

backed by remains of a cairn and other flat stones which might be slipped corbels, but the remains of the "passage" are large orthostatic blocks. There are other stones outside the area planned, some of which appear to be earth-fast, but their relation to the main structure is not apparent.

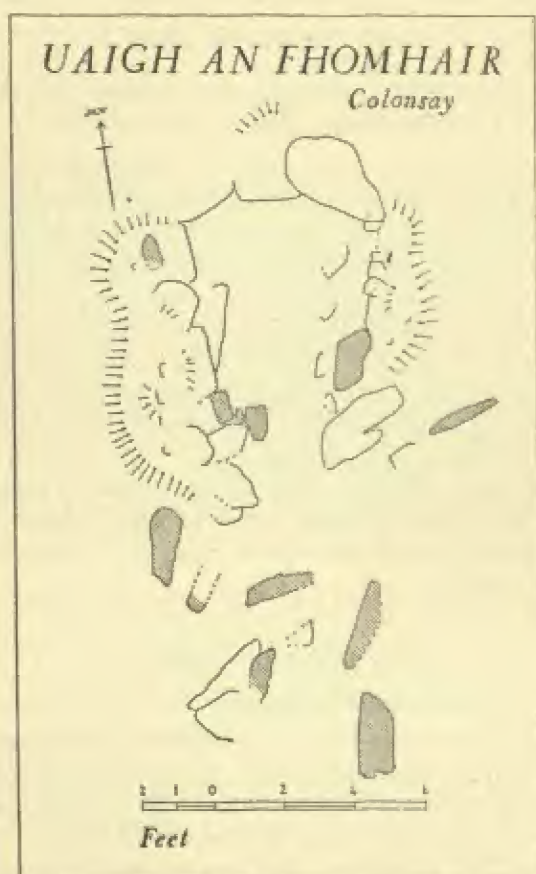


Fig. 1.

Cnoc Eabraiginn, Garvard.—Standing-stone, erect in 1935, but since fallen.

Beinn Earrnigil, Garvard.—Described by Loder as a stone circle, 98 feet from east to west and 108 feet from north to south. Near a group of hut-circles. This consists of angular stones, all quite small and lightly set into the ground, and it is difficult to believe the setting is of any very considerable antiquity.

B. The Duns (fig. 2).

An attempt was made to visit as many duns as possible, and in the absence of adequate information to guide us only to fortified sites, much valuable time was wasted in visiting natural hillocks, often in very inaccessible places, and which may never have been used for defensive purposes. It is known that much robbing of stones for building has taken place, but the probability is that many of the sites now known as duns may only have earned that name through being conspicuous in some way, and likely places for fortification. There are no brochs on either island, and I was unable to find any earthworks. All the defences of the duns are made of stone-work, and I could find no traces of vitrification, though this might perhaps have escaped attention in the necessarily hurried visits. Most of the dry-stone walls surrounding the forts are now grass-grown, and only excavation will show the true nature of their construction. It is worth noting that although Grieve found no evidence for vitrification at Dun Eibhinn, he says: "The Right Hon. Sir John M'Neill, G.C.B., informed me that he had picked up pieces of vitrified material at this place." But no similar claim is made for any of the other forts.

Sites not apparently Fortified.

Dùnan Easdail is a rocky promontory on the north side of Kiloran Bay.

Dùnana Fidean.—Similar, jutting out into the Strand between Colonsay and Oronsay.

Dùnana Iochdar na Garbhaird.—Similar.

Dùnana a'Mhiodaire.—I could find no one who knew the exact location of this, but suppose it refers to a rocky mass in the middle of what is still one of the best pastures in Scalasaig, between the village and the harbour, on the north side of the road.

Dùn Crom.—A hill certainly conspicuous enough to earn a name, but not now fortified, and it is doubtful if it ever was. It is associated with Duns Loisgte and Meodhonach in the place-name Na Dùintean.

Dùn Ghaillionn is just above the abandoned village of Riasg Buidhe, which, according to the remains of an early cross and chapel, must have been a settlement of many hundred years' standing. The dun is a wide, low mound, and quite unlike a fort.

Dùn Leàghan.—Wrongly identified by Symington Grieve as the site of Dùn Leithfinn, on the strength of the similarity in the names.

Dùn Loisgte.—On the other side of Dùn Meodhonach from Dùn Crom. The three together are very conspicuous heights, but only the middle site is fortified.

An Dùnan (or Dùnan nan Nighean according to Grieve) is a round

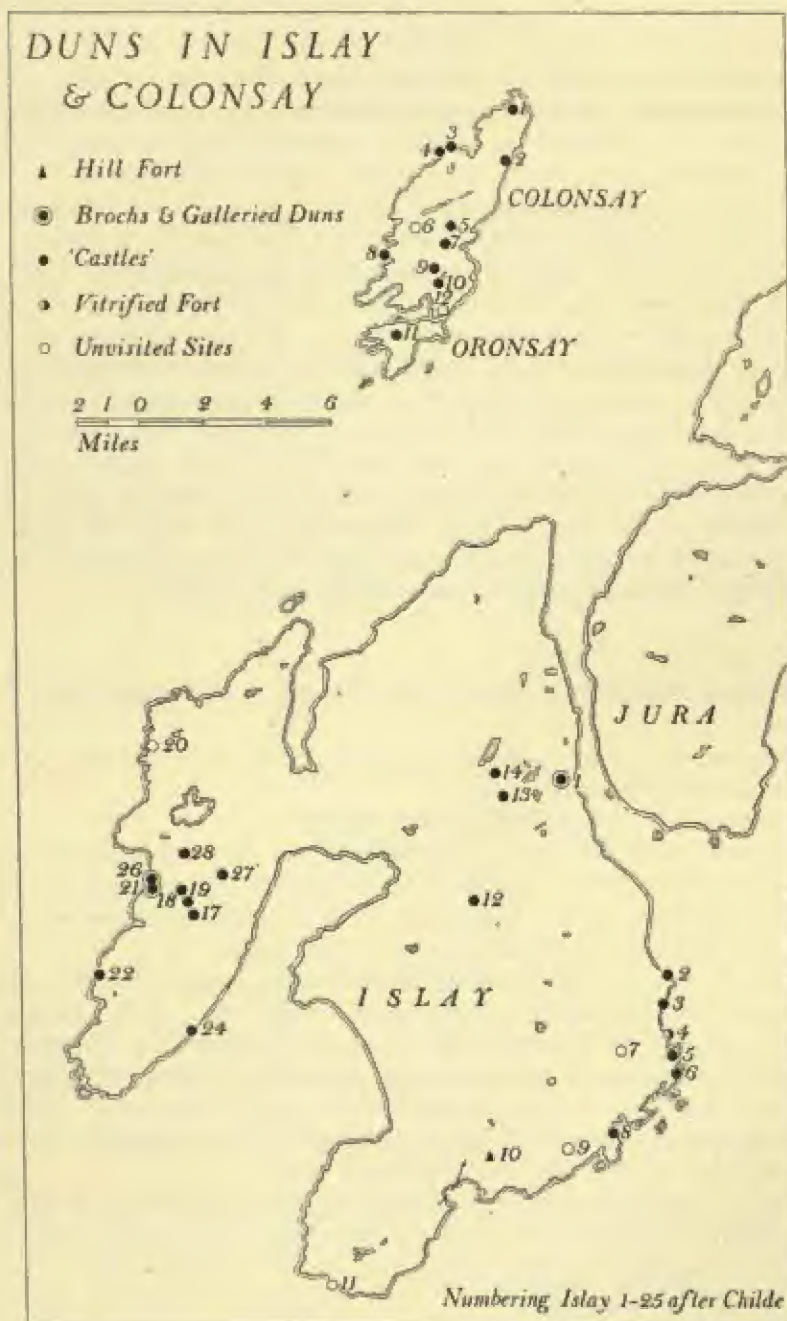


Fig. 2.

rocky height at the extreme west end of the Strand. There are many loose stones lying on the top, but certainly no evidence of any structure.

I was unable to find any sign of Dùn Meodhonach in Kilchattan, but Grieve says: "This is a small dun situated on the steep face of the hill on the east side of the valley near Dremelach, nearly opposite the ruins of Kilchattan Chapel. There are signs of its having been occupied in comparatively recent times. A slight excavation at its kitchen-midden revealed a quantity of bones of the domestic animals."

Sites not Visited. (All on Colonsay.)

Dùnan a' Chullaich, Dùnan Mór, Dùnan na Nighean (Ardskenish), Dùn Creagach, Dùn Dubh, Dùn a' Gharaidh, Dùn na Mara.

There is no reason to suppose that any of these sites, except Dùn na Mara, was fortified. Stevenson mentions that that site "has been circular but now only half remains. The entrance of the fort is better seen here than in any remaining one and goes through a wall about 10 feet thick."

Fortified Sites.

1. *Dùn Meodhonach* (Balnahard).—Long narrow hill between Dùn Crom and Dùn Loisgte. Fortifications follow the crest, with steep drops on all sides. I could find no traces of the entrance, as for considerable lengths all the walling stones had fallen over the edge. There were traces of several circular huts on the top, and an additional line of defence thrown out at an angle on the east side, from which side the fort could have been most easily stormed. This site is very similar to Dùn Cholla.

Grieve says: "About the year 1862, rabbits scraped out of a burrow at the foot of this dun two small metal cups, believed to be of copper or bronze, and two plates of the same material, each about the size of a tea-saucer; also a knife and fork of iron." These objects have been permanently lost outside the island.

2. *Dùnan na Nighean* (Balavetchy).—Possibly a dun. See Part II. of this paper.

3. *Dùn Tealtaig* (Uragaig).—This is a promontory site, without existing defences apart from its naturally strong position. It is defended on three sides by the sea, and has a narrow causeway to the mainland on the east (Pl. XV, 2).

A few circular huts can still be seen on the headland, thus supporting Professor Watson's derivation for *Tealtaig* from a Norse word containing an element meaning "hut."

4. *Dùn Uragaig* (Uragaig) (fig. 3).—Another promontory fort, this time of a pattern not met elsewhere on the islands. There are extremely steep drops on all sides except the south, which is defended by a wall 3 feet high spanning the causeway, and with a narrow gap in the middle. Immediately behind this wall, and following its line, is a cluster of seven huts on the west of the entrance, and at least eight on the east. There are no signs of occupation on the rest of the promontory.

The larger huts are over 20 feet across inside, some are circular and some subrectangular, with well-defined entrances in some cases

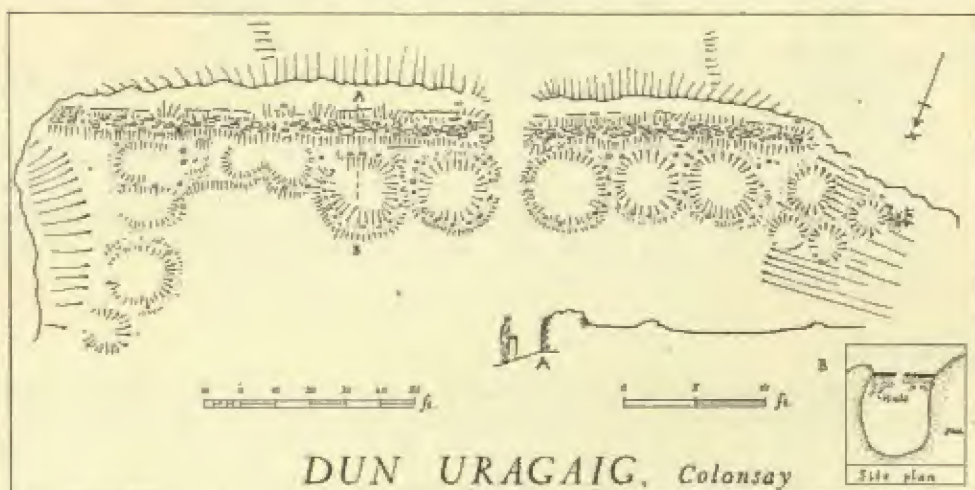


Fig. 3.

and walling about 1 foot high at most. The floor-level in these huts is unfortunately almost on the natural rock, so that finds, were the site excavated, would in all likelihood be rare.

5. *Dùn Eibhinn* (Scalasaig) (fig. 4).—A high flat-topped, steep-sided hill overlooking Scalasaig. The fort rises from boggy land, and is the best-preserved fortification on the islands. There are traces of a number of huts inside the ruined, but evidently strongly built walls surrounding the inner area, and there are other walls below the crest (not shown on the accompanying plan) which have been much drawn on for later building purposes. A great deal of debris is scattered on the slopes of the hill. A rectangular depression can be seen from the plan, under the lee of the south-west wall, and in all probability this may belong to the later (medieval) occupation of the hillside. Other late building remains are round the foot of the fort. The entrance, now somewhat altered and robbed, was narrow and on the north-east side.

On the strength of an early sixteenth-century tombstone in Iona,



1. Unigh an Fhomhair, Colonsay. Kilehatten beyond.



2. West coast of Colonsay, showing Dùn Uragaig and Dùn Tealtaig.



1. Dùn Ghallain. Oronsay beyond.



2. Dùn Cholla. Entrance.



1. Dùn Cholla. Walling on north-east.



2. Dùn Cholla. Wall on north. Oronsay beyond.



1. Dùnan na Nighean. Site from east.



2. Dùnan na Nighean. External wall-face on east.



1. Dûnan na Nighean. Entrance from outside.



2. Dûnan na Nighean. Entrance from inside.

referring to the wife of Malcolm Macduffie, "Lord of Dunevin in Colonsay," Loder, following Grieve, says that this fort was "at one time

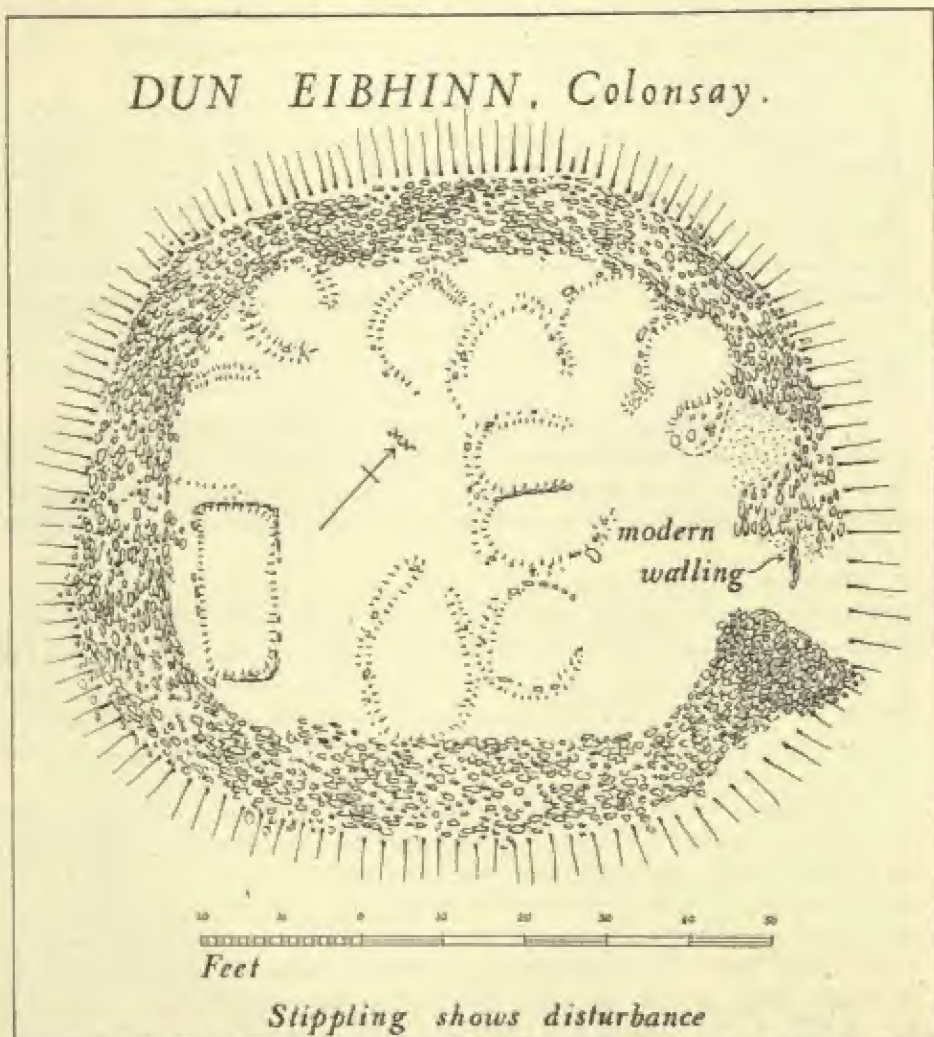


Fig. 4.

the residence of the Macduffie chieftains." Whether or not this was true, the initial building of the fort must have been earlier, and the medieval settlement may be marked by the ruins at the foot of the hill.

See also Martin, *Description of the Western Islands* (Edinburgh, 1703), for references to traditions associated with the site.

6. *Dùn Meodhonach* (Kilchattan).—Not seen. See p. 87.

7. *Dùnan Leathan* (Machrins).—Small flat-topped hill on lower slopes near the junction of the roads from Garvard and from Machrins to Scalasaig. The walling, which is roughly circular and about 43 feet in diameter, does not exactly follow the contour of the hilltop. There is a possible entrance on the south-west.

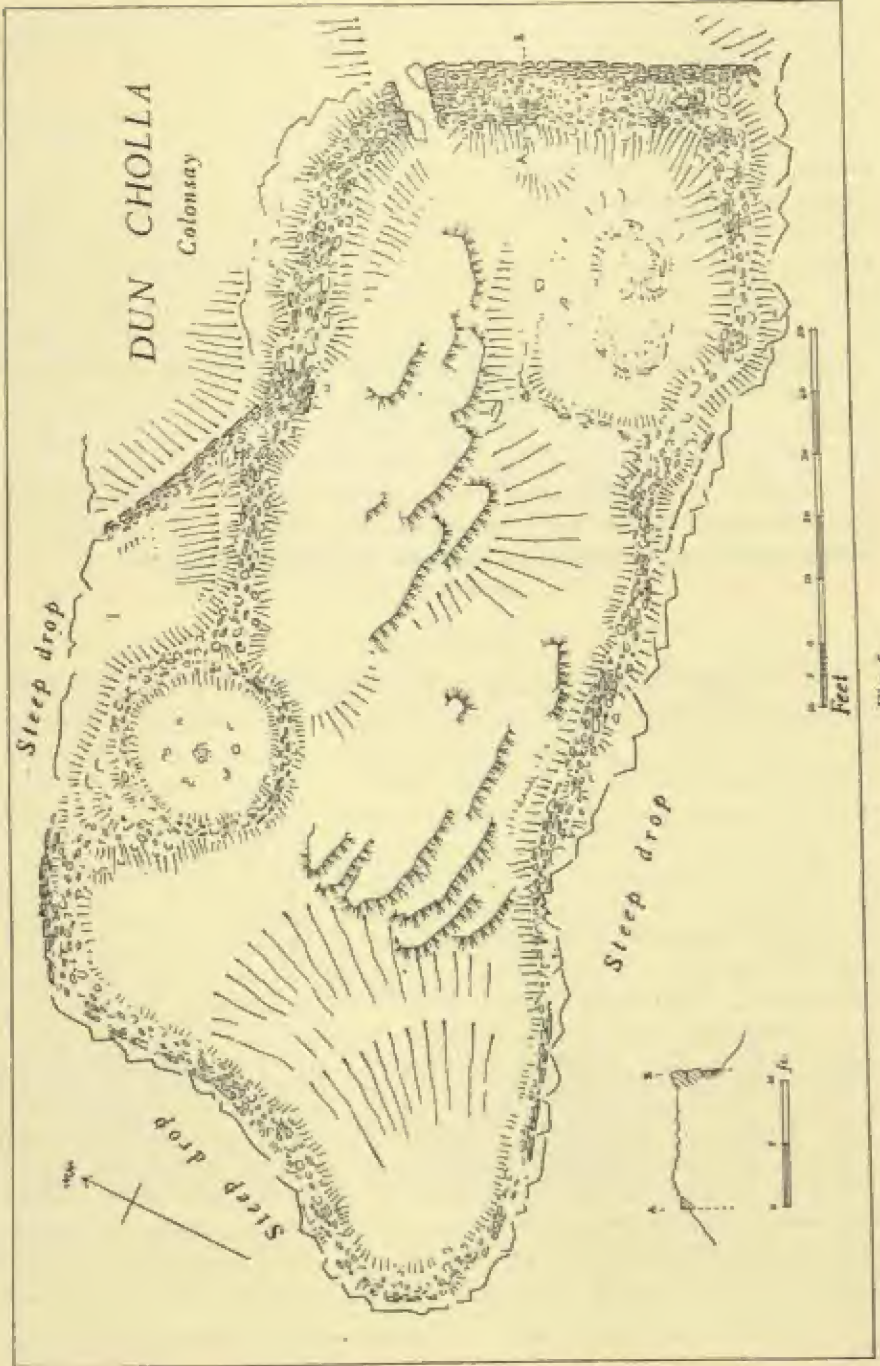
8. *Dùn Ghallain* (Machrins).—Promontory fort jutting out into the Atlantic and with precipitous drops on three sides. The landward approaches from the east are well defended by two lines of defences, the plan of which is not very clear now without a measured drawing. The walls are well built of dry-stone walling, and many large stones have been used. There are traces of possible huts inside, and great quantities of fallen debris all round the hill show that the defences of the fort must originally have been exceedingly strong. This dun is probably not far removed in date from Dùns Meodhonach (Balmahard), Cholla, and Domhnuill. (See photograph, Pl. XVI, 1.)

9. *Dùnan nan Con* (Garvard).—Small roughly circular enclosure on a low eminence overlooking the road from Scalasaig to Garvard. Walls loosely made of small stones and earth. Much overgrown with bracken, and I could find no obvious entrance. Construction similar to Dùnan Leathan.

Without excavation it would not be wise to quote analogies to such small structures, which may not be of very early date. But it is worth noting that Christison¹ remarks: "I found the remains of eight of the fifty-five Lorne forts to be of the broch size and circular form, but in several in which the foundations could be made out, the width of wall seemed to be much too little to accommodate the galleries and stairs of a broch."

10. *Dùn Cholla* (Balaromin Mór) (fig. 5).—Situated on high ground on the east of the road between Scalasaig and the Strand and Oronsay. It is most easily reached from the east, which is the only side that is not precipitous (Pl. XVI, 2). Its long axis, which measures 200 feet in length, is from north-east to south-west, and the cross-measurement is about 80 feet. The walling is over 10 feet wide in the best-preserved portions, and is cut on the east by an entrance only 5 feet wide (Pl. XVII, 1, 2). There are traces of outworks on the north-east and much debris is lying about the slopes. Inside the fort the ground is uneven with outcropping rocks, but there are signs of a wall which seems to make a small enclosure within the main walls in the south-east end of the fort. At the north-west end of the fort is a stone-walled hut-foundation 25 feet across. Concentrically within this is a set of post-holes, enclosing an area 12 feet across, and with a post-hole in the

¹ *Early Fortifications in Scotland* (1898), p. 236. See also "The Duns and Forts of Lorne," by David Christison, in *Proc. Soc. Ant. Scot.*, vol. xxiii. (1888-89), pp. 368-422.



centre. This fort is one of the most spectacular on the island, and is structurally comparable with Dùn Meodhonach in Balnahard, and Dùn Domhnuill.

11. *Dùn Domhnuill* (Oronsay).—A contour fort, very similar in shape and size to Dùn Cholla. It is inland, and on a naturally strong oblong hill with steep drops on all sides, but less steep on the north, which has an additional line of stone-work. The walls have been much despoiled and overgrown, and I could not find a definite entrance. Slight vestiges of circular huts inside, mostly on the west side. Remains of a midden which, according to Grieve, has yielded no datable object.

12. *Dùn na Mara* (Balaromin Mór).—See under "Sites not Visited."

Dùn Mór (Balnahard).—Claimed by Grieve to be part of the fort of Dùn Leithfinn, but there is nothing whatever to warrant such an imaginative suggestion. Of the walls only a short length remains on the north-west, and the rest, if they ever existed, are now entirely destroyed. It is likely that they once did exist, for the appearance of the site itself, on no very considerable eminence, and overlooked by higher hills, would not alone call for special designation.

Conclusions.

With regard to the dating of these small forts (Childe's "castles") we have nothing to guide us, and cannot have until some excavations have taken place. At the present stage of knowledge we do not know whether they were built at widely different times by local chieftains or whether, as is certainly suggested by their distribution in the Hebrides and along the west coast, they were in direct response to one or more threatened invasions. They certainly do seem to be distributed in such a way as to form a defensive chain against a seaward invasion; but again one must stress the danger of drawing conclusions from a map showing the distribution of possibly widely differing types of stronghold. Christison, with whom I cannot agree, tries to explain the distribution of western Scottish forts in the following way. He says: "Thus the complete isolation of the 170 forts of the Argyll mainland, their great abundance on the seaboard of Kintyre, and on the east side of the Firth of Lorne, their abrupt cessation north of Lismore, and their gradual diminution eastward in the county, point probably enough to the settlement of the Dalriadic Scots, first consolidating their position on the coast, in order to keep up their communications with Ireland, and afterwards spreading eastwards through Argyll."¹ But surely a people landing from the sea would not be

¹ *Early Fortifications in Scotland*, pp. 382-3. For the map see Childe, *Prehistory of Scotland*, Map IV, pp. 274-5.

content with forts built right on the coast; they would build them some distance inland to help them to subjugate the inland districts. Possibly our forts were built *against* but surely not *by* the Scotti. If this were so, a date for them in the sixth to seventh centuries would be probable. The *Annals of Ulster* certainly substantiate the fact that some, at least, of the forts were in use about that time. But again we have difficulty, for barely any of the duns mentioned in the *Annals* can be identified to-day. And a much earlier date has been demonstrated for some Scottish forts.¹

We can gain little knowledge either from finds so far discovered or by analogy. Excavation only is likely to help us, and that method may not meet with immediate success in highland regions where finds are scarce and the culture poor. But it is an urgent need of the future that a fort of a type characteristic of many should be extensively excavated, and it is to be hoped that this may be possible at a not too distant date.

II. THE MONUMENT OF DUNAN NA NIGHEAN. By STUART and C. M. PIGGOTT.

This site, No. 2 of the list and map (fig. 2), was visited by us in June 1945 and found to be a puzzling construction which must be discussed in some detail (Pl. XVIII, 1). It stands on a small rocky knob in moorland near the coast above Port a' Bhualtein, with a fine view eastwards towards Jura, Scarba, and the Firth of Lorne, and in its present condition (fig. 6) consists of a mass of tumbled stones rising to some 5 or 6 feet high, with intermittent traces of the lower courses of a retaining wall of coursed blocks following an ovate form approximating to the natural shape of the rock on which it is set. On the east, however, a straight wall-face of massive stones still stands 6 feet high and is 30 feet long, pierced centrally by a still complete doorway 2.5 feet wide and 3.6 feet high, with a massive lintel and remains of at least two courses of walling above (fig. 7, and Pls. XVIII, 2, and XIX, 1, 2).

Inside this doorway is a passage with original coursed walling extending for 7 feet longitudinally and rising to 4.5 feet to the remaining cap-stones which form a roof a foot higher than the opening beneath the lintel. Slight corbelling of two or three courses is used beneath the cap-stones, and there are no traces of door-checks or bar-holes in the walls. At 7.5 feet from the

¹ We must not overlook the possibility that some of the forts may have been in use against the Norse invaders in the ninth century. This might account for the Norse personal names attached to them in several cases. It is worth noting here, too, that a place in Balavetchy has the name *Cearnaborg*, for which Professor Watson suggested the derivation from Norse *kjarna-borg*, meaning something like "best or chief fort." "Borg" can also mean village or settlement, and in either case the name suggests fascinating possibilities.

entrance is a stone forming a sill or step 0.9 feet high, on the further edge of which is a broken stone 0.7 feet high which extends three-quarters of

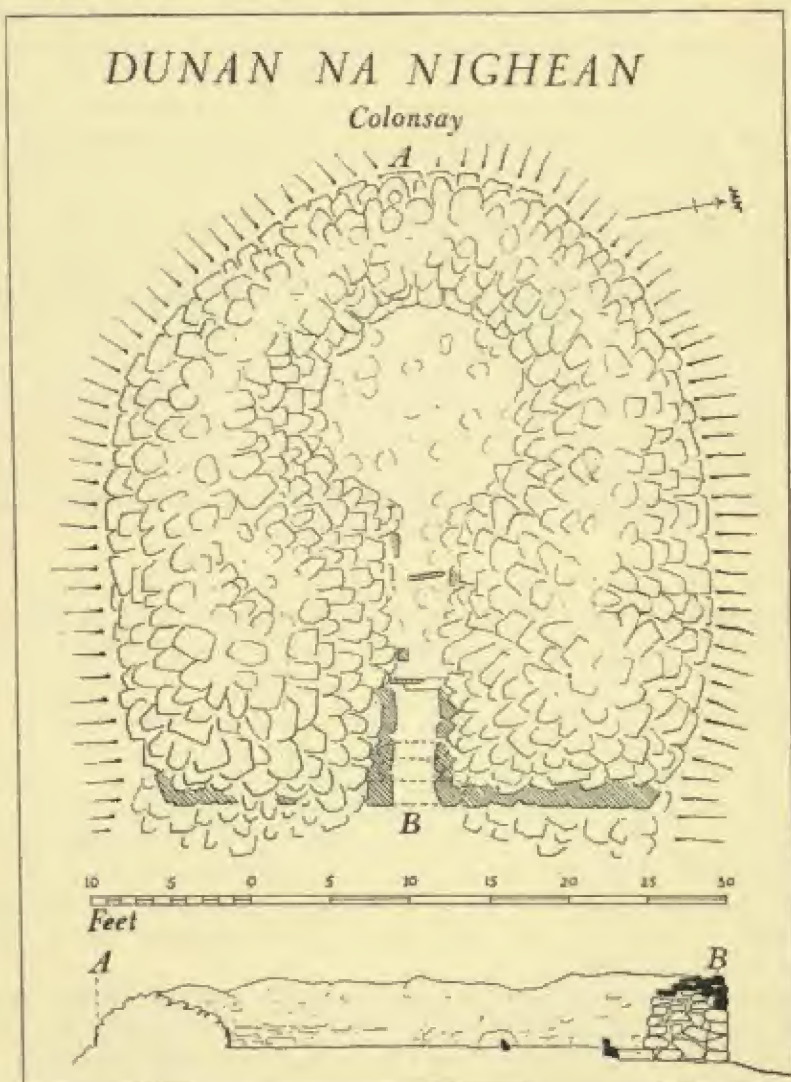


Fig. 6.

the way across the passage forming a "septal slab." Beyond this there is a central passage through the accumulated tumbled stones of the structure with occasional stones which appear to be earth-fast and *in situ*, indicating a constant width of 2.5 to 3.0 feet, and about 15 feet in from the entrance is another transverse thin stone on edge across this passage, suggesting

another "septal stone." At 19 feet from the entrance the passage opens into a circular area 11 feet in diameter with traces of the lower courses of walling on its circumference, above which the tumbled stones of the rest of the interior rise to a height of about 3 feet.

Beyond this structure to the east are the lower courses of a wall enclosing an irregular area outside the straight wall with its entrance, much overgrown with heather but apparently secondary.

The interpretation of these remains is not easy. The interior is so much ruined beyond the 7 feet of entrance passage that one is not able to speak with absolute certainty of its features, but those which have been described

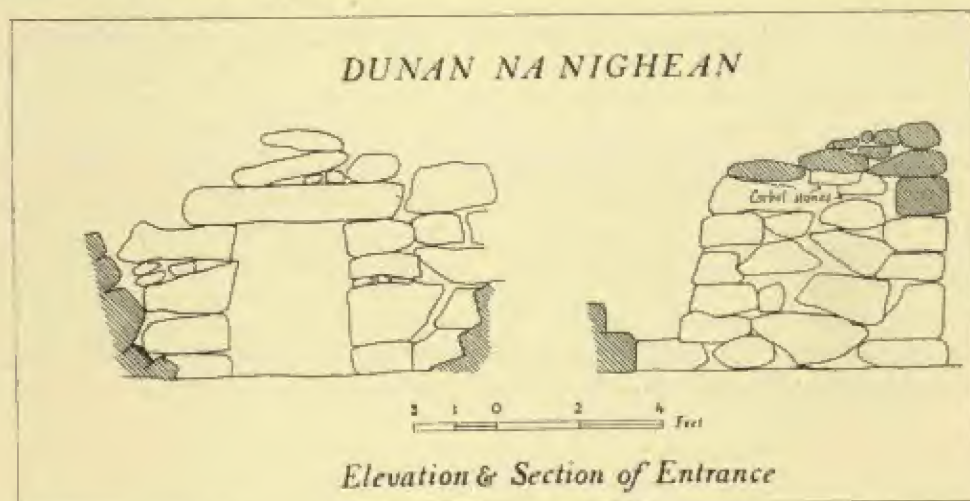


Fig. 7.

above and shown on the plan seemed to both of us reasonably definite. If one were to consider the site as a small dun—a "castle" in Childe's classification—one would have to assume that the apparent circular chamber and the entrance passage beyond the sill and first "septal stone" were the fortuitous result of fallen stones and subsequent robbing for dyke-building, and one would then have a fortified site measuring about 40 feet overall in both directions, with a straight eastern wall with central doorway and an inner area surrounded by a wall 8 or 10 feet thick, leaving a clear space of some 20 by 25 feet. The absence of door-checks or bar-holes at the entrance is noteworthy. These measurements are not impossible to reconcile with such a site, and excavation of Dùnan na Nighean might prove this to be the correct diagnosis, but the remains as they now stand admit of another interpretation, namely that the site is that of a ruined cairn containing a passage-grave with corbelled chamber, and having an impressive flat façade flanking the entrance.

Before examining this claim in detail, it will be convenient to consider very briefly the archaeological background against which such a monument would have to be placed. Daniel¹ had recently emphasised the importance in the north-western series of passage-graves of what he has named the Pavian type from the cemetery of Pavia in Portugal—a circular chamber with a passage normally about one and a half times the diameter of the chamber in length, the whole executed in orthostats or in coursed walling, the latter method of course implying partial or complete corbelling over of the chamber. Of these two building techniques, that of walling with corbelled *tholoi* should be, if the connection with Iberia be accepted, a feature implying an early stage in megalithic colonisation wherever it appears. Such tombs have been recorded from Brittany and Normandy, and in Jersey, La Sergenté is, as pointed out by Jacquetta Hawkes,² a good example of this class of passage-grave. In Ireland, among the passage-graves of the Boyne Culture, such *tholoi* and approach-passages in non-orthostatic construction occur at Tibbradden in the Dublin group of tombs, and at Slieve Gullion in Armagh,³ while in Scotland the Clava cairns (Daniel's Moray Group) show the same form in the typologically earlier examples such as Balnuaran 10 and 12.⁴ In Shetland, the "heel-shaped cairns" recently defined by Bryce,⁵ to which reference will be made again in another context, have irregularly cruciform chambers and approach-passages in non-orthostatic masonry (though at Mangaster is an orthostatic passage and chamber of Pavian type). But, excepting these Shetland tombs, all the other examples cited have a circular or roughly circular cairn without a deliberately emphasised façade. Dimensions are surprisingly concordant throughout the group with circular chambers, the chamber itself varying from 10 to 12 feet in diameter and the passage from 14 to 18 feet: comparable measurements at Dùnan na Nighean are 11 feet and 19 feet.

The presence of septal stones across the passage is not recorded in any of the *tholoi* mentioned above, but need hardly occasion surprise in a west Scottish monument. Such stones occur in the cruciform passage-graves of the Boyne group as well as in the segmented gallery-graves of the Clyde-Carlingford group, and nearer to Colonsay they occur in the passage-grave of Rudh' an Dunain in Skye⁶ and in the surely hybrid passage-grave/gallery-grave of Clettraval in North Uist.⁷

The Clettraval tomb has an additional interest in the present context,

¹ *Proc. Prehist. Soc.*, vol. vii. (1941), pp. 12 ff.

² *Arch. of the Channel Islands*, vol. ii. p. 90.

³ *Proc. Prehist. Soc.*, vol. iv. (1938), p. 241; *Prelim. Survey Anc. Mon. N. Ireland*, pp. 76-77 and Pl. XVI.

⁴ *Proc. Soc. Ant. Scot.*, vol. xviii. (1884), p. 328; cf. also Avelochoan, *Proc. Soc. Ant. Scot.*, vol. xlii. (1910), p. 200; and Childe in *Proc. Soc. Ant. Scot.*, vol. lxxviii. (1944), p. 26.

⁵ *Proc. Soc. Ant. Scot.*, vol. lxxiv. (1940), p. 23.

⁶ *Ibid.*, vol. lxxvi. (1932), p. 183.

⁷ *Ibid.*, vol. lxxix. (1935), p. 486.

as it has a flat façade (i.e. one running straight and nearly at right angles on each side of the entrance) constructed of orthostats linked by dry walling. Scott has recorded another instance of this feature at Unival, also in North Uist¹ (and to comparative examples may be added the West Kennet long barrow in Wiltshire),² and in the heel-shaped cairns of Shetland already referred to, the slightly concave, nearly flat façades are normally built of massive but non-orthostatic walling.

It will be seen, therefore, that parallels both for the general type and for detailed features of Dùnan na Nighean interpreted as a passage-grave site are to be found in areas and circumstances that make their combination in Colonsay by no means improbable. If, *pace* Childe, Daniel is right in considering the Clava cairns to come early in the Scottish passage-grave series (a view which seems to have a very great deal to recommend it), our Colonsay site may occupy a very important position between the Irish *tholoi*, as for instance at Slieve Gullion, and those round the Moray Firth, for surely the line of colonisation between these two areas (if the linking up of the two groups of *tholoi* be accepted) would be up the Firth of Lorne and along the Great Glen.

We suggest, in view of these facts, that there is a tenable case for interpreting the Dùnan na Nighean monument as a ruined passage-grave within a roughly circular cairn, having a circular *tholos* chamber originally corbelled and with a symmetrical flat façade at the entrance. It is possible that this façade may imply a gallery-grave tradition fused with more orthodox passage-grave ideas, but examples of such fusion in Western Scotland are not unknown.³ Excavation of the site, with the accurate determination of its internal plan, alone seems likely to bring the problem a stage nearer solution.

III. A NEW CHAMBERED TOMB, AND DUNS IN ISLAY.

By STUART and C. M. PIGGOTT.

We were able to carry out a week's field-work, mainly by bicycle or on foot, in western Islay in June 1945. Attention was particularly directed to visiting sites of duns which had not been included by Professor Childe in his "Notes on Some Duns in Islay" in *Proc. Soc. Ant. Scot.*, vol. lxix. (1935), pp. 81-84, and the 1-inch Ordnance map, Popular Edition, Sheet 69, War Revision, 1940, was used as a basis for the identification of sites. This map is overprinted with the Cassini Grid, and references are given by this simple and accurate method for the benefit of those who may use gridded sheets in

¹ *Antiquity*, vol. xvi. (1942), p. 305.

² Inadequately shown on Thurnam's plan in *Arch.*, vol. xxxviii. p. 410, but clearly visible on the site. *Wills. Arch. Mag.*, vol. i. (1940), p. 57.

³ Though Scott (*loc. cit.*, *supra*) has recently controverted this view.

the future (*cf.* a note on the use of military map grids for archaeological purposes in *Ant. Journ.*, vol. xxv. (1945), p. 80). Duns visited by Childe were numbered up to 25, and our numbering has therefore continued from this in the text and on the map, fig. 2. One new dun site unrecorded on the map was found (No. 26), in addition to a new chambered tomb and the probable remains of others, and some minor sites.

A. Megalithic Monuments and Allied Sites.

Gallery-Grave near Port Charlotte. (Grid Ref. 746814.)

On the east side of the main road from Port Charlotte to Portnahaven, between it and the sea and half a mile from the former village, remains of a chambered tomb lie in a large grass field partly used as a recreation ground, and occupying the level area on top of a raised beach. The field has at some time been under plough, and the cairn originally containing the grave is much mutilated at its edges as well as badly robbed for stones, but its approximate present form is shown on the plan (fig. 8). The extant remains of the chamber show it to belong to the well-known class of segmented gallery-graves of the Clyde estuary, two examples of which had previously been recorded in Islay, in the Port Ellen neighbourhood at Cragabus and Ballynaughton.¹ The gallery appears to have been some 23 feet long by 4 feet wide, and originally divided into four compartments by septal stones, two of which, that at the entrance and the next beyond, remain *in situ*. A large stone lying across the entrance appears to be a fallen portal stone, and slipped corbels are visible in the remains of the cairn which fringe the chamber. The forecourt area is mutilated by ploughing and stone-robbing, but appears to have been originally of crescentic form. The monument is a welcome addition to the Clyde group of cairns, and agrees well in its proportions and dimensions with such fine tombs as East Bennan, Giant's Grave, and Carn Ban in Arran, all with the gallery about 24 feet long and an overall width across the "horns" of some 60 feet. (Not on 1-inch map.)

Probable Ruined Gallery-Grave, Brahanisary, near Port Ellen. (Grid Ref. 873698.)

This site is situated on the south side of the road which turns off from the Port Ellen-Lagavulin road to the farm of Brahanisary, below the Borraiehill Mór hill-fort (Childe's No. 10, where the name is given as "Borraiehill Mór"), and 350 yards due south of the farm, just within the 150-foot contour and by a farm track. There are irregular remains of a cairn up to 3 feet high and now measuring about 40 by 15 feet. One stone, presumed to be a side stone of the gallery, is standing near the middle of the south-west side of this ruined cairn, 7 feet long by 2 feet 6 inches high and 1 foot thick.

¹ *Proc. Soc. Ant. Scot.*, vol. xxxvi. (1902), pp. 110-4.

There are other large stones near, but nothing certainly *in situ*. The axis of the structure would be roughly north-west-south-east. (Not on 1-inch map.)

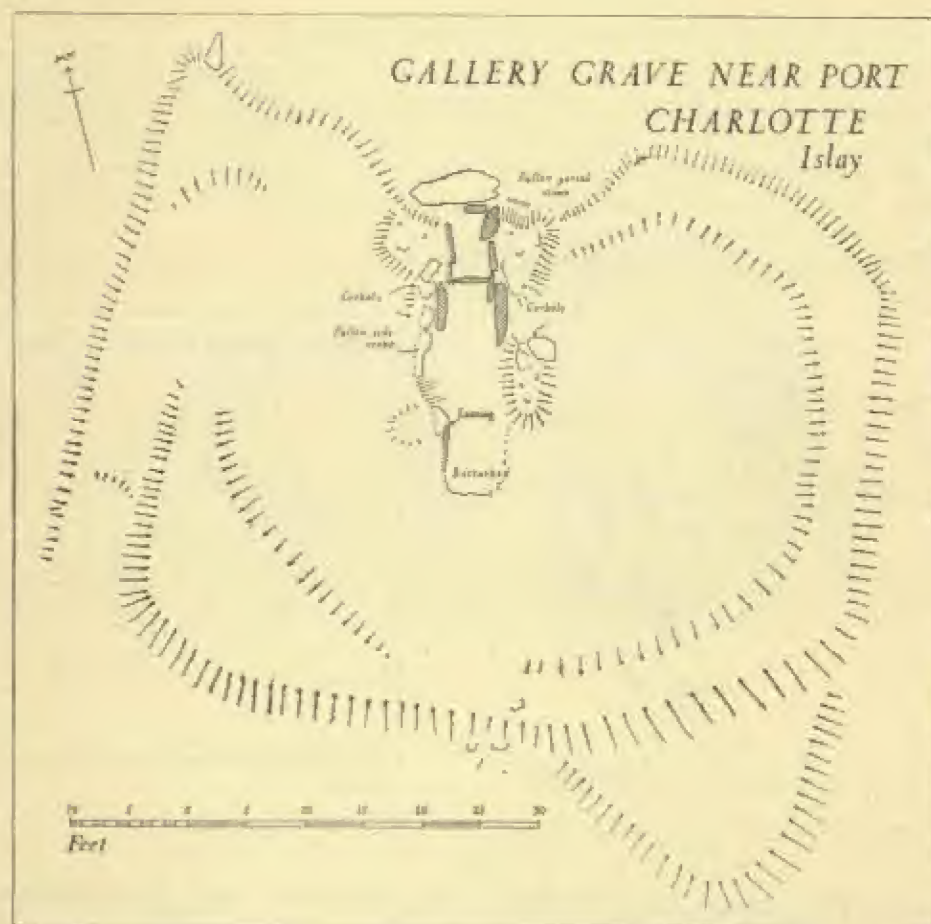


Fig. 8.

Possible Ruined Megalithic Tomb near Dùn Chroisprig. (Grid Ref. 704856.)

Below Dùn Chroisprig (Childe's No. 21 but re-described and planned below) is a group of stones with remains of cairn material about them, lying nearer the sea than the dun and between it and the road from Kilchiaran to Kilchoman. Several stones are on edge and earth-fast, and others are fallen or leaning, and the whole suggests a small burial-chamber with remains of half a crescentic forecourt and façade. The form and arrangement of the stones which would constitute the chamber on this supposition are not,

however, comparable with the comparatively thin flat slabs normally used in tombs of the Clyde type to form rectangular compartments. It is planned in fig. 9. (Not on 1-inch map.)

Standing-Stone at Uisquintuie. (Grid Ref. 790873).

A large and conspicuous standing-stone is situated half a mile west of the Uisquintuie road-fork on the coast road round the head of Loch Indaal between Bridgend and Bruichladdich. The stone stands on the crest of an old shore-line north of the road, and is 11 feet high, 5 feet wide, and 2 feet thick. It is not marked on the 1-inch map.



Fig. 9.

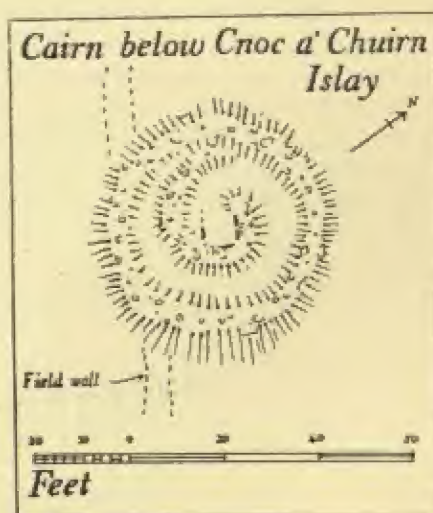


Fig. 10.

Cairn with Cist below Cnoc a' Chuirn, Port Charlotte. (Grid Ref. 738806.)

On the west side of the road from Port Charlotte to Portnahaven, one and one-eighth miles from the former village, are the remains of a small cairn within an enclosing circular wall or bank (fig. 10). This enclosing circle appears to be a ruined and grass-grown wall 40 feet in diameter, within which is a cairn about 20 feet across which has been dug into, with the spoil thrown out on the north-west, exposing side stones of a cist 6 feet across between the two sides now visible on north-east and south-west. The cairn stands not more than 1 foot 6 inches to 2 feet high, and the enclosing circle is about 2 feet 6 inches high above the surrounding ground. A grass-grown and collapsed field wall of a now-deserted crofter's settlement is built against the south-west side of the ring. (Not on 1-inch map.)

B. Duns and Fortified Sites.

Dùn Chroisprig (Childe's No. 21). (Grid. Ref. 705856.)

This site has already been briefly described by Childe in his paper cited above, but we have made a plan (fig. 11) recording certain structural features which seem to us to merit fuller description. The dun is built on a knob of

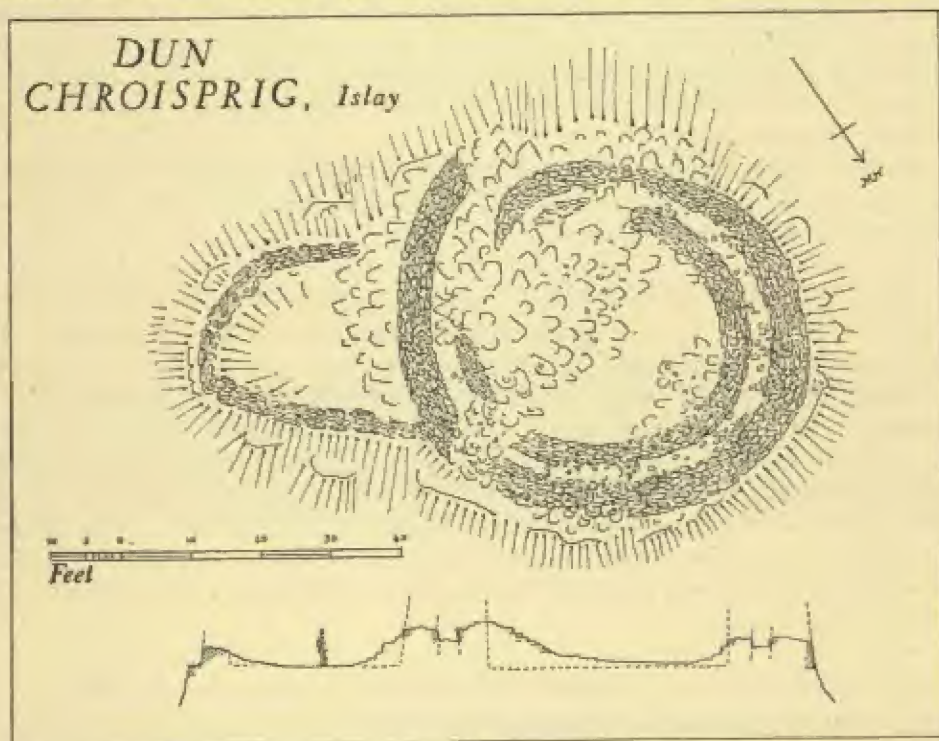


Fig. 11.

rock with almost precipitous slopes below a 400-foot-high rocky hill overlooking the long, sandy beach of Machir Bay to the west. The main structure is roughly circular, consisting of a massive wall of coursed stones 12 feet thick and containing for almost the whole of its circuit traces of a central passage or gallery 2 feet 6 inches to 3 feet wide. The outer wall-face still stands to a height of 3 to 4 feet on the north-west, and must stand nearly 6 feet high beneath tumbled stones on the south-east, and has a slight but perceptible inward batter. The site is therefore that of a *galleried dun* or even a *broch*, comparable with that identified by Childe at *Dùn Bhoraraic* near Port Askaig on the north-eastern shore of Islay. There is a very large quantity of tumbled stones strewn the site and the slopes of the rock

on which it stands, implying walls of some height. The entrance appears to have been on the south-west (seaward) side and is very much obscured by fallen stones. There is, however, a definite incurved face to the left-hand wall (as one stands facing the entrance from outside), and it seems possible that the entrance led direct to a stair within the wall thickness, as the outer element of the right-hand wall overlaps considerably, as can be seen on the plan. Galleried duns have been described by Childe,¹ and since this they have been further discussed by Fairhurst in his publication of his excavation of the Kildonan galleried dun in Kintyre²—a site which, apart from medieval reconstructions, appeared to date from between the third and seventh centuries A.D.

On the south-eastern side of Dùn Chroisprig an area 25 by 20 feet is enclosed by the remains of a wall of coursed stones, probably subsequent to the main galleried structure.

26. *Galleried Dun or Broch, Traigh Mhachir.* (Grid Ref. 703859.)

At the southern end of the Traigh Mhachir beach an unrecorded site was found on a small rocky knoll above the sea, just to the west of the Kilchiaran-Kilchoman road immediately before it degenerates into a trackway. It is the much destroyed remains of another galleried dun or broch of the Dùn Chroisprig type, its overall outside measurements being 78 feet north-south and 68 feet east-west, with traces of a gallery on the south side 3 feet wide, and visible for a length of 35 to 40 feet. The outside wall is here 4 to 5 feet thick, but the inner wall-face is nowhere traceable. The walls are of coursed masonry but nowhere more than a few courses high. (Not on 1-inch map.)

27. *Dun below Cnoc na h-Uamha, Bruichladdich.* (Grid Ref. 741860.)

On a rocky knob in water-logged moorland westwards beyond the farm of Gartacharra and one and a half miles from Bruichladdich. This is a small dun of Childe's "castle" type, irregularly oval in plan, with overall outside measurements 60 by 46 feet. The interior is piled with tumbled stones and no inner wall-face can be traced, but the outer face is preserved to a height of 8 feet on the north-west and is slightly battered, of good quality coursed stonework. There is an entrance 6 feet wide on the south-east, and no trace of galleries in the walls.

28. *Dun at Rockside, Kilchoman.* (Grid Ref. 721875.)

On a knoll adjacent to the farm of Rockside, half a mile north-east of Kilchoman Church. This is a very small "castle" type of dun, roughly D-shaped, with a probable entrance on the south-east and with overall

¹ *Prehist. of Scotland*, pp. 201 ff., with refs.

² *Proc. Soc. Ant. Scot.*, vol. lxxiii. (1939), p. 185.

measurements of 30 by 27 feet. It appears to consist of a rampart of stones and earth rather than a true stone wall, which is not above 2 feet or so in height.

29. "*Fort*" at *Ballygrant* (Childe's No. 14). (Grid Ref. 884902.)

This is a small promontory fort on the end of a ridge above Loch Finlaggan and a quarter of a mile north-west from Ballygrant School. The roughly triangular area, 105 by 54 feet, is enclosed by a much ruined stone wall which incorporated upright stones set on edge as facing. There is no recognisable entrance.

"*An Dun*" on *Rhinns Point*. (Grid. Ref. 676751.)

This site, marked as an antiquity on the 1-inch map, was found to be a natural rock-mass with precipitous sides but with no trace of artificial fortifications.

Note on the Plans.

The plans and sections illustrating the three parts of this paper have been made from field surveys with tape and prismatic compass, and do not pretend to the accuracy which would be expected from detailed surveys made with instruments and occupying a long period of time, such as would be necessary in advance of the excavation of any of the sites we have described.

X.

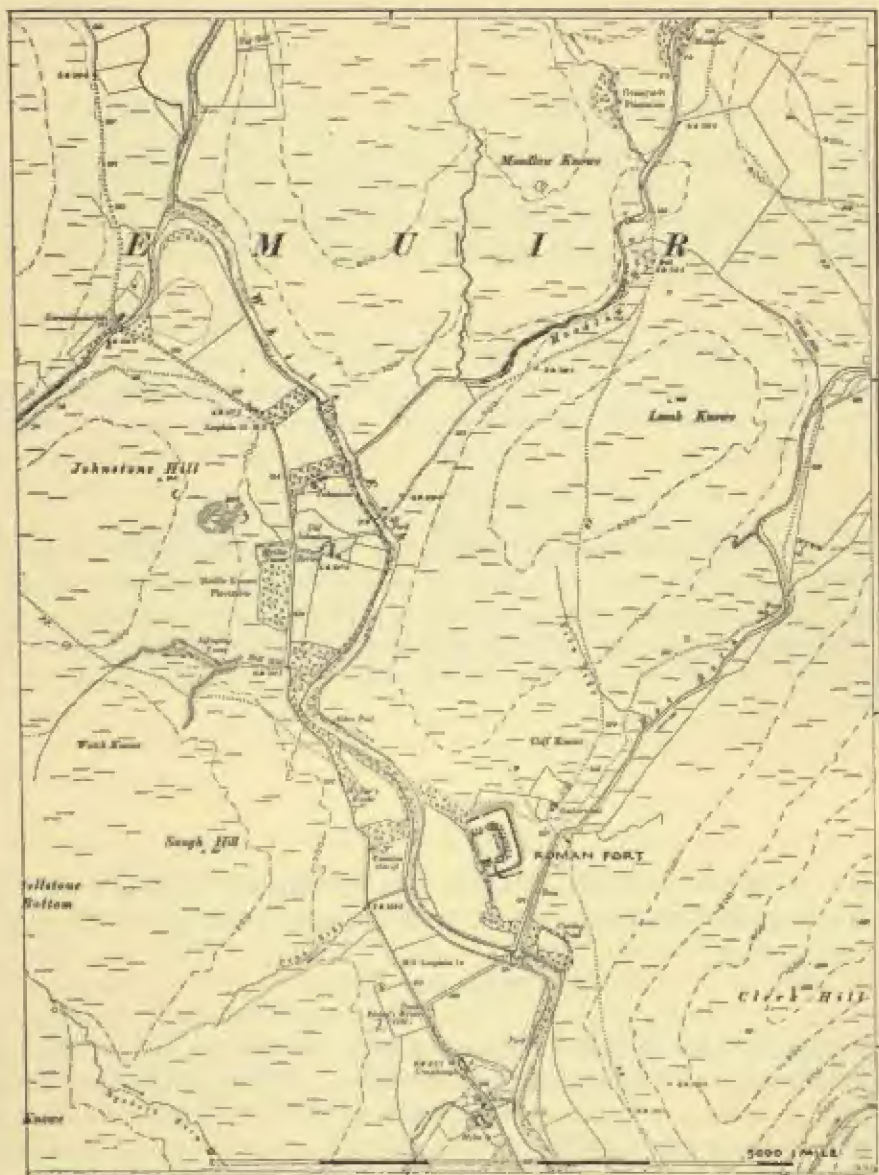
A NEW ROMAN MOUNTAIN-ROAD IN DUMFRIESSHIRE AND ROXBURGHSHIRE. BY I. A. RICHMOND, M.A., LL.D., F.B.A., F.S.A.Scot.

Read March 11, 1946.

The Roman fort at Raeburnfoot,¹ Dumfriesshire, is one of the most isolated and remote of Roman sites in Scotland. It lies at the head of Eskdale (fig. 1), fourteen miles above Langholm, at the point where the tortuous Esk emerges from the foothills of the Ettrick massif, having provided a minor through route between north and south. Traditionally, the valley below Raeburnfoot is said to have been occupied by a Roman road:² and

¹ For accounts of this site see *Statistical Account* (1841) *Dumfriesshire*, pp. 402-4; *R.C.A.H.M., Dumfriesshire*, item 172, p. 68; *J.R.S.*, vol. xxxvii, p. 166; *Trans. Dumfr. and Gall. N.H. and A. Soc.*, vol. xxiv, pp. 152-4.

² *Statistical Account* (1841) *Dumfriesshire*, p. 404, note, and p. 420 (Langholm parish).



[Reproduced from the Ordnance Survey map with the sanction of the Controller of H.M. Stationery Office.]

Fig. 1. The site of Raeburnfoot.

this tradition, while as yet wholly unverified by modern research, may well be worth credence, since the well-attested Roman marching-camp¹ at Gilnockie and various coin-finds,² including the early *aurei* from Broomholm, attest Roman penetration of the dale. If, however, a road may thus have connected Raeburnfoot with the lower valley, no one has suggested that it continued northwards, for a northward continuation would involve a course so tortuous as to be wholly unacceptable to the Roman engineer. Nor does the position of the fort at Raeburnfoot suggest that its function was to guard a route between north and south. It has no good outlook in either direction, and the northward view, in particular, is almost immediately cut off by the bold spur of Moodlaw Knowe, which juts out from the east side of the valley. This point is so obvious that when the writer paid his first visit to the site, with Mr James McIntyre, on 12th May 1935, he came away convinced that the function of the fort was to look eastwards up the long valley of the Rae Burn and westwards up the corresponding gap on the opposite side of the valley and that along this line would ultimately be found the explanation for the existence of so remote a site.

Somewhat later than 1935 facts began to accumulate in other parts of Roman Scotland which help us better to understand the function of Raeburnfoot. The Roman works there, perched on a 40-foot bluff now partly eroded by the turbulent Esk, comprise inner and outer superimposed works, each definable as a permanent post on the strength of its massive rampart.³ The outer and earlier work,⁴ a rectangle measuring some 570 by 540 feet over its 30-foot rampart, is defended by a single ditch, and its size is suited to a large cohort or an *ala*. The inner work,⁵ which plainly has succeeded it, measures some 270 feet square over its 38-foot rampart, and is defended by a double ditch. Its much smaller size plainly demonstrates that its garrison was a small one, whatever class of unit⁶ it comprised. But by 1939 discoveries elsewhere⁷ were showing that sites of this kind, small fortlets defended by a stout rampart and one or more ditches, are an outstanding

¹ Gilnockie, *R.C.A.H.M., Dumfriesshire*, item 45, pp. 27-8, with plan (fig. 28). Cf. *Statistical Account*, *op. cit.*, p. 490.

² Sir George Macdonald, *Proc. Soc. Ant. Scot.*, vol. lii, p. 241. The *aurei* divide into six from Broomholm, one from Wauchope bridge holm and one from Canonbie, in a glebe field east of the church. They are so close in date, however, as to raise the question whether they did not form part of one hoard.

³ For details of these ramparts, recently examined by Dr St Joseph, see sources cited in note 1, p. 103.

⁴ There is no doubt that, as at Castleshaw, the outer work is earlier, since it would have been impossible to use it effectively with the inner work in existence. The east to west dimension is conjectural, but the planning suggests that the north to south road was axial. It seems doubtful whether the south gate has a *clavicula*, the appearance of such a feature being caused by the road swinging eastwards as it emerges from the gate. See *R.C.A.H.M., loc. cit.*

⁵ It will be noted that the commencement of the north-west angle of the rampart of this work is visible and that the outer ditch appears to have been carried straight through to the edge of the escarpment, while the inner ditch swings round the angle (*ibid.*).

⁶ In Roman Germany forts of this size normally housed *numeri*, but the British system is unknown. In area the fort is most like Crawford. See *J.R.S.*, vol. xxix, p. 201.

⁷ See *J.R.S.*, vol. xxx, p. 161; *Antiquity*, vol. xiii, pp. 280-92.

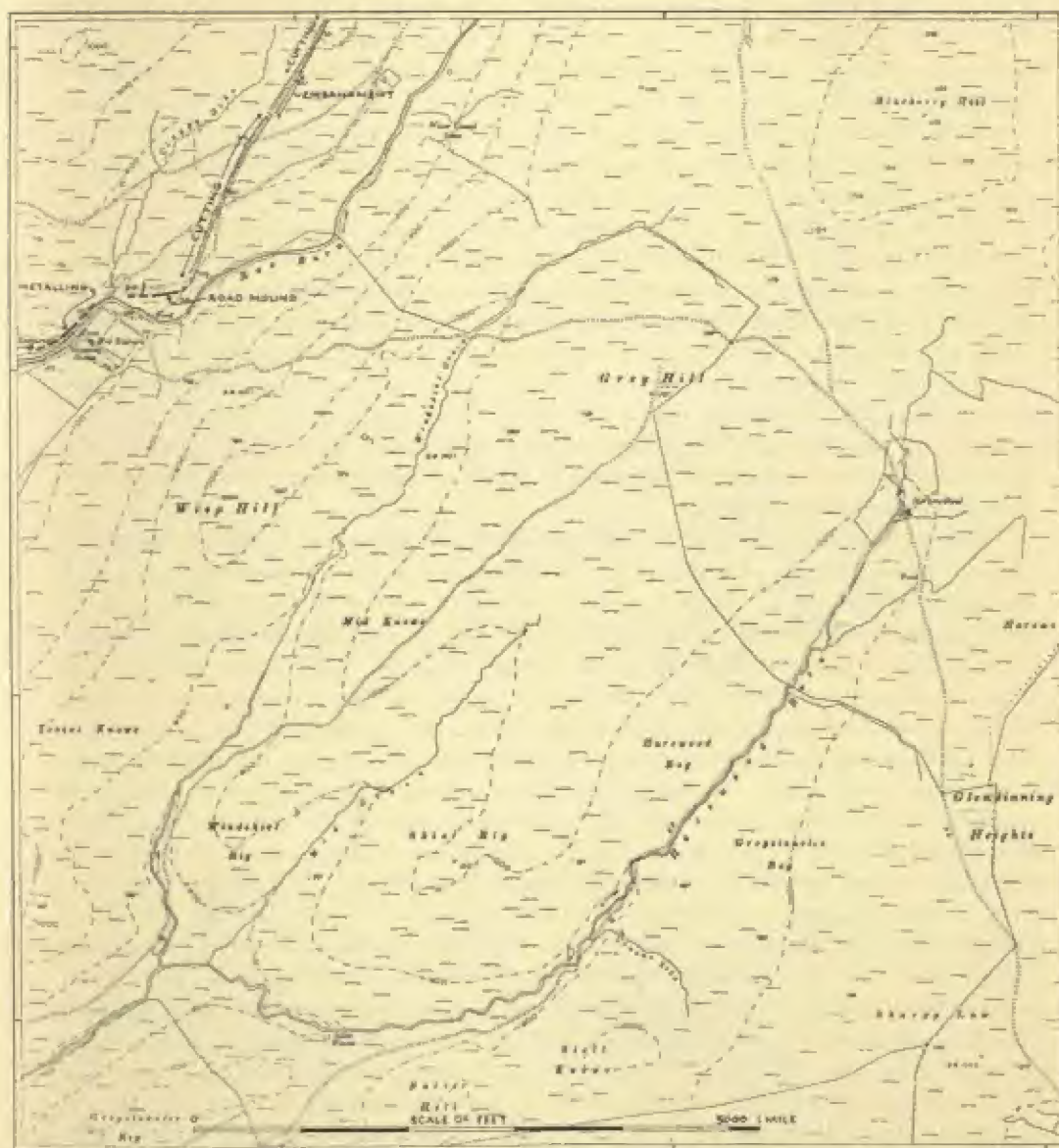
feature of the Antonine organisation of Southern Scotland. Six still smaller examples had then been identified—at Tassiesholm, Redshaw Burn, Durisdeer, Chew Green, Castle Creg, and Kaims Castle—and it has since become clear that this number is representative rather than in any way exhaustive. With the exception of Castle Creg, of which the connections are still to seek, all are connected with Roman roads. They were evidently the quarters for patrols, signallers, or convoy-guards; in short, of the minor units which knotted tight the relentless grip of the Roman net. The second fort at Raeburnfoot is obviously yet another example in the series, and this fact alone would give validity to the inference that it once formed a link in a vanished section of the strategic cordon.

A clue to the missing section was soon furnished by an unexpected source. The late R. P. Hardie, whose studies of mediæval roads in Lauderdale have all the strength that is to be derived from a detailed knowledge of maps and all the weakness of work unrelated to examination of the ground, drew attention¹ to Raeburnfoot in a digression upon the roads between Roxburgh and Annandale. He observed that the central massif of Craikmuir, here throwing off opposite spurs north of the Rae Burn and the Borthwick Water, was crossed by an old traffic line. Hardie's map was not closely enough contoured to show him that he was wrong in describing this route as occupying the crest of the spur. But, struck by the choice of ground, by the general straightness of the line, and by the relationship of that line to Raeburnfoot, he went so far as to suggest² that this road might be Roman in origin. It seems that he never visited the area to put this view to the test, nor did he add to his general conclusions the highly significant fact that no other direct and unswerving route across the central massif is attainable for long miles to north and south. But it was obviously desirable that someone should test the notion, and, in the course of his duties as a Royal Commissioner for Ancient Monuments, the writer took opportunity to examine the course of the road in Roxburghshire in July 1945, accompanied by Sir Walter Aitchison, Dr St Joseph, and Dr Philip Gell. The continuation in Dumfriesshire was viewed later in the same season by the writer alone, and an ordered account of the remarkable remains now visible on the ground is here offered.

For two miles north-east of the Roman fort at Raeburnfoot the valley of the Rae Burn offers no convincing remains of ancient roadways. The stream meanders about in a wide and stony bed cut deep in the valley floor, and the resultant terrace, which would carry roads or tracks above flood-level, is deep in tussocky grass. A modern cart-track wanders tortuously up the north side of the valley, and only close to the ford and bluff between Kiln Sike and White Sike is there any suggestion of a more solid road. Above Raeburnside, however, and opposite the footbridge to Mid Raeburn

¹ R. P. Hardie, *The Roads of Mediæval Lauderdale* (1942), pp. 47-8.

² *Ibid.*



[Reproduced from the Ordnance Survey map with the sanction of the Controller of H.M. Stationery Office.]

Fig. 2. The Roman road at Mid Ræburn.

farm (fig. 2), there is a strong metalled roadway running along the haugh north of the stream, but this is interrupted by heavy erosion of the north bank at the watersmeet of Rae Burn and Cleggy Sike. Then, east of two deserted cottages (not marked upon the Ordnance Map), the road appears again as a broad cambered mound, 2 feet high and 20 feet wide, running dead straight along the haugh to a point where a wide cutting carries it up on to the spur between the Rae Burn and Cleggy Sike. The mound here is evidently composed of the gravel which abounds in the haugh.

The foot of the cutting is much broken up by tracks and by modern carting, but it is soon plainly visible to north-west of the existing cart-track, and, as soon as the steep ascent is passed, the cart-track swings across to the left side of a broad terraced roadway at least 18 feet wide, formed by cut-and-fill in the hillside. The straight south-eastern edge of the feature is visible for the next thousand yards, with some bold embanking, extending for about 150 yards, half-way long the spur. Its antiquity is shown by the number of cart-tracks and hollow tracks, which meander freely within and beyond its limits, sometimes cutting it badly to pieces but never completely obscuring the general line.

The spur along which the road is running is then cut by Near Paddock Cleugh, draining out of a broad and marshy gap between the Rae Burn and Moodlaw Burn. The modern cart-track and some of the hollow tracks swing to east, and form a deep hollow road which very soon turns northwards in an oblique descent alongside the cleugh (fig. 3). The ancient line runs straight ahead for about 160 yards as a prominent terraced roadway, over 18 feet wide, and meets the head of the cleugh at right angles by means of a bold cutting about 50 yards long. The stream is here a broad marshy belt, in which "paddocks," or frogs, no doubt abound in due season, and the crossing is deep in mire, while the terraced ascent of the road on the other side is deeply cut to pieces by five hollow tracks which run on and beyond the terrace and speak of an age-old use of the original engineered track as well as its ultimate desertion. On the shoulder between Near Paddock Cleugh and Far Paddock Cleugh, however, the terraced roadway becomes clear again and so continues for about 400 yards. It is here 27 feet wide, with a deep hollow track on the south-east side; and material derived from the terracing has been used to form a broad embankment descending straight into Far Paddock Cleugh, though somewhat cut about by hollow tracks to the north-west. Across the stream the ascent is again much cut up and finally deserted by hollow tracks. The nature of the subsoil now becomes clear. It is a laminated shale,¹ of which the thin strata are tilted at an angle of over 70 degrees, so that they break off in small cubes closely resembling road metalling, though they are in reality detritus from the living rock.

¹ Geological Survey, sheet 16.



[Reproduced from the Ordnance Survey map with the sanction of the Controller of H.M. Stationery Office.]

Fig. 3. The Roman road on Humphrey Law and Lamblair Knowe.

The nature of the subsoil, here revealed, entirely explains the type of road adopted from the Rae Burn onwards. The shale lies immediately beneath the natural upper surface of thin weathered brash and tussocky grass. No other material for building a road is to be had, except river-gravel from the Rae Burn, and it would be impossible to make this lie upon the shale,¹ apart from question of transport. The engineers of the road which we are describing have thus perforce had recourse to the shale, forming their roadway in cuttings and terraces which, in the absence of alternative material, provide a road-surface of soft rock and material for embanking. The use of the shale surface or of the spoil from terracing or cutting also explains the absence of quarry pits. Had the road been constructed of quarried material laid upon the subsoil, either large sporadic quarries or a series of quarry-pits parallel with the roadway might have been expected to occur. But here the prepared track forms its own quarry, and the cut-and-fill technique employed in its construction provides ample material without going beyond the track of the road for it.

The road now climbs steadily from Far Paddock Cleugh along the north-west shoulder of Humphrey Law, aiming for a point just below the crest and thus avoiding the deep bays or cleughs on both sides of the ridge which reduce the passage along it to a series of comparatively narrow necks. It has here been a terraced road for a distance of some 700 yards. But when the summit, at about 1290 feet above sea-level, is passed, a fresh complication is introduced by the occurrence of a peat-bed, varying in thickness from a few inches to 4 or 5 feet. Faced by the peat, the roadway engineers, still compelled to rely upon the underlying shale for their surface, changed their methods and dug a broad cutting, 30 feet wide, through the peat and the underlying brash in order to bare the shale itself. Then, in order to give the necessary drainage and to prevent the road from becoming swamped, they cut drainage-ditches on both sides of the bottom of the cutting, thus leaving an almost flat causeway of living rock some 20 feet wide to serve as the roadway in the centre of the cutting. The original form of the work (fig. 4), however, is now frequently disguised, partly by growth and swamp and partly by hollow tracks which swerve about in the cutting, first wearing down the old surface and eventually avoiding the resultant swamps by intruding into the sides of cutting or even climbing out of it where the peat is not too deep. The modern cart-track picks its way among the resultant confusion as best it can. An excellent example of the relationship between old and new occurs at the top of the cutting, which is over 300 yards long, where it leaves the shoulder by a slight zigzag. The modern track zigzags the opposite way in order to avoid the swamp which has gathered at the elbow.

¹ Supposing a bed to have been cut in the shale to contain bottoming, the problem of drainage would raise impossible difficulties.

The cutting runs down to the Queen's Mire ¹ between Green Cleuch and Queen's Mire Sike, which was originally crossed by a bold embankment over 100 yards long, still discernible but much cut about by cross-drains and tracks. The hollow track lies to north and the cart-track further north still, running upon a small causeway of its own, clearly derived from a relatively modern quarry at the north end of the crossing. The old road has then climbed the south-east shoulder of Lamblair Knowe by a cutting some 300 yards long, much cut up by hollow tracks and the carting-track.

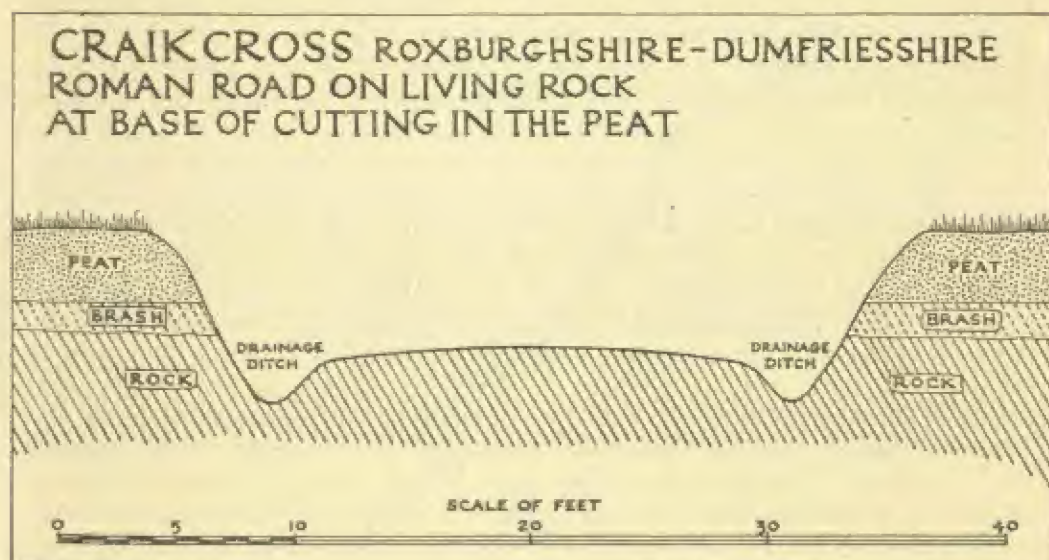


Fig. 4. Diagrammatic section of Roman road on Craik Moor.

Next comes a terrace of about the same length, where the modern track tends to make a lower shelf of its own and the older work is revealed as well over 20 feet wide. Now follows a long cutting in the peat, continuing for seven furlongs and laid out along the crest in seven very unequal point-to-point sectors. The best example of the angular changes of direction in this cutting is on Roney Rigg, where a boundary fence crosses the road, after which the cutting runs dead straight for 400 yards. The hollow tracks and carting-tracks, worn in the shale, here attain a depth of 3 feet, a fact which speaks eloquently of the high antiquity of the original feature. There follow (fig. 5) 300 yards of terraced track, over 21 feet wide, and a 400-yard cutting which descends to the flat and ill-drained neck between Cherry Sike and Gowl Sike and provides the material for a 380-yard embankment crossing

¹ The origin of the Queen's Mire is the local tradition concerning the journey of Mary Queen of Scots to Hermitage, which in fact took place by a more southerly route.

it. A terraced roadway then ascends the shoulder of Craik Cross, but the exact form of the road on the summit, 1476 feet above sea-level, is obscured by the hollow tracks, some of which converge into one broad hollow 5 feet deep. The original form of the road was apparently a shallow cutting, baring the rock.

The true summit of Craik Cross lies 22 yards north of the road and is 1481 feet above sea-level. From it an astonishing view is obtained. Immediately to north, the Ettrick Hills stand out bold and forbidding, while to west and south-west the distant horizon is closed by the fells above Torthorwald and by Criffel. Southwards, Birrenswark rears its distinctive table-mountain above the tangle of foothills, and the gleaming Solway outlines the Cumberland plain backed by the great buttress of Saddleback and Skiddaw. No less magnificent is the eastward view, where, on the north, the spurs of Ettrick jut out toward the Tweed and the triple peak of Eildon, upon which our road is manifestly aimed. To east stretch the wide valleys of Teviot and Rule, divided by the rugged mass of Ruberslaw, and to south the whole line of the Cheviot Hills, from Carter Bar to Cheviot, form a noble and clear-cut background to the swelling contours and twisted cleughs and hopes which run out towards Liddesdale and the North Tyne. Perhaps no summit in Southern Scotland affords a more remarkable view in every direction.

The actual summit north of the road is occupied by an earthwork, comprising a circular ditch 40 feet in diameter over its centre line with a bold mound inside it, 4 feet high and some distance away from the lip of the ditch. The effect is not that of a cairn or tumulus, but is highly reminiscent of the Roman signal-tower¹ at Robin Hood's Butt, on the high moor of Gillalees, between Birdoswald and Bewcastle. Only excavation, however, will show what reliability is to be placed upon the resemblance.

Once over the summit, the road plunges into a cutting 400 yards long, followed by an embankment 100 yards long, laid out in two straight sectors, across the neck between Corse Grain and the head of Borthwick Water. Then the road twists up on to the south-west side of the next shoulder (which has no clear recorded name), negotiating the rise by a cutting some 70 yards long and a terraced track 200 yards long. On the crest is a cutting over 350 yards long and 6 feet deep, in which the hollow tracks have extended the original width of 30 feet to about half as much again in places in an effort to keep out of the swampy bottom. On the neck between Rushie Grain and Hazely Sike the embankment derived from the cutting is almost completely buried in peat, and peat-cutters or shepherds have erected a

¹ C.W. 2, vol. i. pp. 82-3; vol. xxxiii. pp. 241-5: recent excavation by Dr St Joseph has, however, shown the mound to be an earthwork, of uncertain nature. See *Trans. Dumfr. and Gell. N.H. and A. Soc.*, vol. xxiv. p. 152.

little turf-built rectangular enclosure,¹ 24 by 42 feet in size, with a curved tail-like bank at the east end, right across the mouth of the cutting. The road next climbs on to Laird's Knowe in a cutting 200 yards long, much eroded and cut to pieces by hollow tracks, and a bold terrace well over 18 feet wide runs for 300 yards into a cutting through the peat about 370 yards long and 3 to 4 feet deep. At the eastern mouth of this cutting is another turf-walled enclosure across the line of the road, similar in size and plan to that previously described.

The road then becomes a terraced road once more, dropping gently down the south-eastern shoulder of Craik Moor, high above Craikhope and the Borthwick Water. It is here still aiming straight for the Eildons. At 250 yards below the eastern mouth of the cutting the terraced road is joined by a relatively modern track from Craikhope farmstead, predecessor of the still more modern metalled road which runs up the bottom of the valley on the south side of Borthwick Water. This Craikhope track, now used only to cart peats, has largely obliterated the remains of the older road by cutting a new and lower terrace along the edge of the older one. As the road descends towards the watersmeet of Northhope Burn and Borthwick Water all traces of ancient work disappear and the fringe of the cultivated area is reached. We have, however, now described over $6\frac{1}{2}$ miles of ancient roadway and it is time to take stock of the matter.

The first point which clearly emerges from a scrutiny of the remains is the high antiquity of the original engineered road. It is severely damaged at numerous points throughout the course by long desuetude and erosion, and as many as five hollow tracks, not to mention the modern carting-track, have worn their way deep through the already disused road. In the cuttings through the peat the state of the original roadway has become so bad, partly through wear and tear and partly through blockage of the original drainage system, that the tracks have made every effort to avoid it. Such a history of wear and tear on a rock surface clearly places the road well back beyond the age of modern engineered roads of any kind; and, in connection with this conclusion, it should be observed that there is no record in the *Statistical Accounts* of any road-making on this line during the eighteenth or nineteenth centuries.

The second point which emerges is the notable quality of the engineering of the original road. The impressive fact is not so much that a great roadway 20 feet wide has been driven for over six miles across wild moors and peat hags: it is that no roadway could have been here constructed at all without a penetrating appreciation of the local terrain, which imposes such formidable and peculiar conditions upon choice of materials and route. No construction could take place until the possibilities of the shale rock had been

¹ Christison, *Early Fortifications in Scotland*, p. 368, fig. 130, illustrates some rather different rectangular enclosures with not dissimilar tails; also p. 367, fig. 129. They are doubtless shielings of one kind or another.

thoroughly explored, and this entailed the mastery of the peat by vast cuttings, totalling almost two miles in length. The cutting and embanking is comparable with work upon a railway line, and from this a third point follows. The scale of the work is so vast that it would require labour beyond the resources of a local undertaking in any age.

When the full significance of these three points is realised it will be apparent that the double skill, in choice of course and use of materials, and the ample resources of labour are typical of one period alone before the rediscovery of road engineering in the eighteenth century, that is, the Roman Age. In short, a detailed study of the engineering of the line makes it possible to agree with Hardie's suggestion¹ that the original Craikmuir Road was Roman, since it reveals that the line was originally occupied by an engineered road whose magnitude and boldness of conception is in every way worthy of the Roman genius.

It may now be asked how far analogies for this type of construction are forthcoming from Roman roads. The local conditions impose, first, the use of rock as the road surface. This is matched upon Dere Street² at Shibden Edge, upon Blackstone Edge³ in Rag Sapling Clough, and upon Sarn Helen⁴ south of Caer Llugwy. Examples could be multiplied, but one more may be cited, because it belongs to the Queen of Roman roads, the Via Appia itself. On the rocky hillsides,⁵ south of the *pons Aricinus* and south of Terracina, this greatest of Roman roads used the living rock as its surface where the natural formation was suitable. The second condition, imposed by local vegetation, is the need for the cuttings through the peat. This is matched upon Blackstone Edge,⁶ where, from the summit to Rag Sapling Clough in Yorkshire, a distance of some 1400 yards, and from the summit to the Halifax road in Lancashire, about 1000 yards, very similar cuttings, through peat of much the same depth, permit the Roman pavement there to be laid upon a firm bottom of gritty sand. But Roman roads through peat mosses are much rarer than Roman roads on rock; they have been little studied and other analogies are not to hand. For example, the Roman road between Castleshaw and Slack, which undoubtedly crossed⁷ the deep peat beds of Standedge, is now so deeply buried in the accumulated cotton-grass of Featherbed Moss that no estimate of the original arrangement is possible. The principle of the use of the cutting in these conditions is, however, firmly established by its employment upon Blackstone Edge. One common feature of Roman roads is notably absent. There are no quarry pits⁸ along

¹ Hardie, *op. cit.*, p. 48.

² Personal observation: a detailed account of this road will appear in *R.C.A.H.M., Roxburghshire*.

³ *Trans. Rochdale Lit. and Sci. Soc.*, vol. xv. (1925), p. 53; *Huddersfield in Roman Times*, p. 89.

⁴ J. P. Hall, *Caer Llugwy* (1920), Appendix.

⁵ Personal observation.

⁶ *Huddersfield in Roman Times*, p. 88, fig. 55.

⁷ The road is plain as far as the shoulder of Standedge, above Castleshaw, and is next known for certain north of Slack.

⁸ Cf. *Proc. Soc. Ant. Scot.*, vol. lxxix. p. 172.

the course of the road, as so frequently along other Roman roads of Scotland. Their absence, as already explained, is due to the local geology. But it is interesting to observe an instructive parallel from Dere Street of the abandonment of normal construction and methods owing to scarcity of stone. Between Foulplay Head and Harden Edge, south of the Coquet, the course of Dere Street lies for a mile or more over a slightly dished plateau covered with shaly clay, where no outcrop of stone occurs. In this sector there are no quarry pits: using only the material immediately to hand, the constructors have reared a great *agger* of the local clay, 3 feet high and 28 feet wide, and have surfaced it, when beaten hard, with a thin skin of the broken shale. These conditions¹ were noted by the writer in 1945, during the cutting of a modern military road through the ancient mound, but it is not the first time that they have been seen, for General Roy, in his wisdom, records this kind of mound as an uncommon type² of construction. As he observes, it is a concession to local conditions. It is valuable as showing how far from the normal construction, with heavy bottoming and gravelled cambered top, a Roman road might deviate. In its own way, this deviation from the normal on Dere Street is as great as that upon the Craikmuir road, though the different local conditions produce a wide difference in kind.

Finally, we may return to the general significance of the road. First, there is no doubt as to its ultimate objective. Just as Dere Street, having crossed the Cheviot, sets its course, with intermediate concessions to local configuration, upon the Eildons, so does the Craikmuir road. Both are converging upon *Trimontium*, the largest fort in Roman Scotland and the pivot and centre of the road network behind the Antonine Wall. The Ingliston milestone,³ from west of Cramond, which is measured from *Trimontium*, emphasises this nodal aspect of the site. The function of our road is thus presumably to link the south-west with *Trimontium*, and the lonely site at Raeburnfoot falls into place as an intermediate fort or fortlet along it. Having regard to the siting of Raeburnfoot, and the fact that it watches not only the Rae Burn valley but a gap by which there is an easy approach to Eskdale from the southwest, there can be little doubt that the road once ran across the dale to join the main north and south road somewhere near Lockerbie, at the foot of Dryfedale. But at this point in our inquiry the old tradition of a Roman road penetrating Eskdale itself from Netherby and the south must be recalled. The strategical function of Netherby is a double one, to watch both Eskdale and Liddesdale. If it was thought necessary to continue the authenticated line of Roman road beyond Netherby and so to link the great strategic road-centre of Carlisle or Stanwix

¹ More recently, the same conditions have been observed by the writer on Dere Street south of Soutra Aisle, the *agger* being derived from a broad cutting on the uphill side of the road.

² Roy, *Military Antiquities*, p. 108: the third category in his description of types.

³ *C.I.L.*, vol. vii. p. 1085; *E.E.*, vol. ix. p. 620. The last line of the text reads [*Tri*]monti m[illia] p[assuum]. . . . For the construction, see *E.E.*, vol. ix. p. 1253.

with that of *Trimontium*, there were two ways of doing this. The modern lines of communication choose Liddesdale: but both railway and roads become involved in very difficult and heavy engineering in doing so, taking circuitous valley routes or using narrow defiles of a kind unwelcome to the Roman engineer. Nor is there any tradition of a Roman road along this route. The alternative line is by lower Eskdale, where there is both a tradition and some actual evidence of Roman penetration, and beyond which we have now discovered the cross-route traversing the central massif. This route, unlike the modern roads farther south, does not occupy defiles, but seizes the one point where it is possible to engineer a straight and uninterrupted course across the mountains. The discovery must originally have been the result of a detailed and able reconnaissance of the area, and its value was very great; for it gave to the Romans the most southerly cross-link between east and west yet discovered to north of the Tyne-Solway line. It would be not unnatural to have linked Netherby with this cross-route by a direct road up the valley of the Esk, thus providing the most direct communication possible between the major strategical centres of Carlisle and Newstead.

XI.

THE TOLQUHON AISLE, AND OTHER MONUMENTS IN TARVES KIRKYARD; WITH SOME FURTHER NOTES ON TOLQUHON. BY W. DOUGLAS SIMPSON, M.A., D.LITT., F.S.A.Scot., F.S.A.

In my paper on "Tolquhon Castle and its Builder" contributed to our *Proceedings* in 1938,¹ an illustration (reproduced herewith, Pl. XX, 1) and a short account were given of the tomb which the seventh laird of Tolquhon, William Forbes, built for himself in 1589 in the parish church of Tarves. As this monument is one of the most remarkable things of its kind in the north of Scotland, it seems worthy of a fuller description and investigation, particularly in view of its importance for the history of the spread of Renaissance influence in Scottish architecture during the reign of James VI.

The present kirk of Tarves was erected in 1798, and is a plain but dignified specimen of a Presbyterian preaching-house of its time. The building, which lies east and west, measures 75 feet in length by 39 feet 7 inches in breadth. The masonry is large, squared pink granite rubble, and on the south front and west gable the cherry-cocking remains; on the other sides it is obscured by harl. Except the north window, which is lintelled, the doors and windows have plain round arches. On the west gable is a belfry of good simple design. An organ chamber on the south side, a heating-

house on the north, and a porch and vestry at the west end are subsequent additions. The interior of the church was rearranged in 1825.¹ The church occupies a striking position on a high knoll, and before the village houses obscured the view, it and its medieval predecessor must have commanded an extensive outlook. The church of Tarves was granted by William the Lion to the Abbey of Arbroath,² and most of the early documents illustrating the history of the parish are therefore to be found in the Register of that monastery.

The old church is said to have been dedicated to St Englatius, a fictitious person whose name, according to Professor Watson, has been compounded from the Gaelic word *oenglais*, "choice brook." Tanglan's Well is still shown near the church, and on the River Ythan is Tanglandford. According to the *Martyrology of Oengus*, the Celtic founder of the church was St Murdebur or Muirdebar, a missionary from Leinster who flourished about the year 600.³ The dedication is thus an interesting proof of the early influence of the Irish Church in north-eastern Pictland.⁴

In the *View of the Diocese of Aberdeen*, written in 1732, the following description is given of the former church⁵:—

"The church has a choir and two isles: one for the Gordons of Haddo, now ruinous; another for the Forbeses of Tolquhon, also ruinous. Sir Thomas de Longovile (otherwise called the Red Reaver), the French pyrate, whom Wallace is said to have taken at sea, and recovered to a regular life, is reported to have dyed at Ythsie, and to lye at the east end of this church. It is added that the two blew stones, now on the stair-head of Tolquhon's loft, whereon now nothing can be discovered graven but a cross, were taken from his grave."

Quite possibly these two cross-marked stones were memorials of the Celtic Church. The Tolquhon monument lies 48 feet south of the eastern half of the present church, hence it seems that the latter must be situated somewhat to the north of its medieval predecessor. On either side of the monument the original rubble masonry of the aisle wall remains, though obscured by modern pointing. When the aisle was dismantled this wall was crowned by a massive pediment of pink granite stones, similar to those used in the new church. The back of the wall is entirely hidden in ivy.

The total height of the monument, to the crest of the heavy embattled cornice, is 7 feet 6 inches, and its over-all breadth is 8 feet 10 inches. The depth of the tomb recess is 1 foot 11 inches; the span of its arch, 5 feet 10 inches; height of the arch, 3 feet 4 inches.

¹ *New Statistical Account*, vol. xii. p. 675.

² *Registrum Velus de Aberbrothoc*, p. 5.

³ *Martyrology of Oengus*, ed. W. Stokes (Henry Bradshaw Soc.), p. 240.

⁴ See W. J. Watson, *Celtic Place-Names of Scotland*, pp. 318-20.

⁵ *Coll. Shires Aberdeen and Banff*, p. 320.

The arch is framed within elaborate Renaissance baluster shafts. Each has a central medallion. The dexter medallion displays a bear's head muzzled coupéd for Forbes, and the sinister one shows the boar's head coupéd of the Gordons.

The arch-mould is a quirked and filleted edge-roll flanked by hollows, of which the outer one is wider and carries a series of Tudor roses. Outside this is a quirked quarter-round.

The hood-mould has a sloping upper surface, at the apex of which is a royal crown, with two unicorns facing it, one on either side, after the manner of supporters. I take it that this is intended to portray the Laird of Tolquhon's status as a tenant-in-chief of the Crown, in the same way as he put the royal arms over his own castle gate. On either side of the arch, and facing in towards the crown, are the following subjects: dexter, a hound collared pursuing a fox, which is escaping with a goose in its mouth; sinister, a hound collared pursuing a hare. These animal figures are executed with the utmost verve. In so far as they have any special significance, I suppose they may be taken to portray the old laird's love of field sports. The underside of the hood-mould has a remarkable composite ornament on its rounded surface. The upper part of this ornament takes the form of a draped curtain or frill, looped up in a series of folds; the lower part is the classical egg-and-dart.

In the dexter spandrel is a shield of florid Renaissance design, displaying arms: quarterly, first and fourth, a bear's head coupéd, muzzled and collared, for Forbes; second and third, a unicorn's head coupéd for Preston—the family through whose heiress the estate of Tolquhon came to the Forbeses. The shield is surmounted by an esquire's helmet, against a foliaceous background, perhaps intended for plumes, and is flanked by the laird's initials, W. F. Below is a scroll dated 1589. Extending up into the apex of the spandrel is another scroll with the Forbes motto, SALVS PER CHRISTVM. The reversed tail of the scroll bears an arrow pointing to the beginning of the inscription.

In the sinister spandrel is a shield of plain heater form. It shows the laird's arms impaled with those of his wife—three boar's heads coupéd for Gordon. The shield is surmounted by a plumed hat. From the point of the shield springs a large conventional grape-like fruit. This shield is flanked by the lady's initials, E. G. for Elizabeth Gordon, and a scroll in the apex sets forth her genealogy: DOCHTER · TO · LESMOR.

The tracery of the tomb-arch is cusped quite in the traditional manner, but the points end in scrolled triangles of a very un-Gothic aspect.

The dexter supporter of the arch is a portrait statuette of the laird. He wears a flat cap, a ruff, a puffed and slashed doublet buttoned up the middle, and full puffed and slashed knee-breeches. He has large curled moustaches and a forked beard, and his expression is a pleasing one. The sinister

supporter is his lady. She wears a long embroidered gown with full sleeves, and a ruff. Her hair is braided. Like her husband, she looks in good humour, though she has a most determined chin. These figures in three-quarter relief carry semi-octagonal corbel-caps of good Late Gothic design. The over-all height of the figures, including the corbel-caps, is 1 foot $2\frac{1}{2}$ inches.

In the back of the tomb-recess is a sunk panel, evidently intended for an inscribed stone. It measures 2 feet $4\frac{1}{2}$ inches broad and 2 feet 7 inches high, the depth being 4 inches.

The front of the tomb-chest displays an arcade of seven bays of Renaissance balusters bearing round arches, enriched with the egg-and-dart, and cusped below; in their spandrels is a foliaceous ornament, and in the half spandrel at each end a flower. In the centre bay of this arcade are a skull and cross-bones, with the adage MEMENTO MORI. The projecting under edge of the tomb-slab has a twined-ribbon and staff moulding, the staff being raguly, and the ribbon enriched with a sunk pattern.

The whole monument is crested with a miniature corbelled and embattled parapet, having three console-like projections, forming caps respectively to the side-shafts and to the central crown.

The material is a warm red sandstone, which has weathered exceedingly well. Indeed the carving, save in one or two places, is almost as sharp as when it was cut.¹ The stone appears to have come from Cammalown in Fyvie. All the carving is executed with perfect mastery, and the entire monument is pervaded by distinction. In my former account I described it as "a remarkable example of the bastard Gothic of the period. Its general design remains thoroughly medieval, but much of the detail is pseudo-classical in character. This is particularly seen on the arcade in front of the tomb-chest, and in the balusters on either side. The grotesque animals on the extrados of the tomb-arch are quite in the whimsical and vigorous style so often found in sculptured work of this period in the north-east of Scotland; while the 'mort's head' on the tomb-chest represents the incoming of a degraded taste that reached its climax in the two following centuries."

Another example, more or less contemporary, of the "mort's head" may be seen on a corbel in the oratory of Towie Barclay Castle, Auchterless.² It may be regarded as the first emergence of that gruesome funerary symbolism which may be studied, in all its vigorous and fascinating crudity, upon so many of the older monuments in our parish graveyards.

Built into the pediment above the tomb is a keystone boss. It has a Renaissance shield displaying the laird's arms, surmounted by an esquire's helmet. The shield is flanked by the initials V. F. Round the edge of the

Some trifling but necessary repairs were effected on the monument, a year or two before the war, by the late Mr J. Duthie Webster, of Tarves.

¹ *Proceedings*, vol. lxiv. pp. 84-5.



1. The Tolquhon Monument in Tarves Kirkyard.



2. Heraldic Stone found among ruins of the "Auld Tour."

W. DOUGLAS SIMPSON.

MONUMENTS IN TARVES KIRKYARD.

[To face p. 120.



Tomb of Bishop Gavin Dunbar, in St Machar's Cathedral,
W. DOUGLAS SIMPSON.

MONUMENTS IN TARVES KIRKYARD.



Portrait medallion of Prince Charles Edward, and Seton enamelled finger-ring. (†).
R. B. K. STEVENSON.

JACOBITE RINGS.

boss is a vine scroll, extremely well done. This boss may perhaps be accepted as proof that the Tolquhon Aisle was vaulted.

It is obvious that our Tarves monument has been inspired by Bishop Gavin Dunbar's beautiful tomb (Pl. XXI) in St Machar's Cathedral, Aberdeen.¹ The corbel-figures supporting the tracery, the Tudor roses in the cavetto round the arch, the armorial bearings and the lettered scrolls in either spandrel, and the corbelled and embattled cornice with its three console-like projections engaged respectively with the pinnacle-finials and the ornament at the apex of the arch—all these, and other features, prove the close kinship between the two works.

We can hardly doubt that the master-mason or architect of the Tolquhon Aisle will have been the same man whom the laird at that very time was employing to make such an imposing addition to his "auld tour" two miles away. The style of the lettering of the inscriptions on the tomb and on the castle corresponds, the twined-ribbon enrichment on the edge of the tomb-slab reappears on the castle front, and the two statuettes of the laird and his dame on the monument have their counterparts in the quaint figurines that adorn his gatehouse. Also the sandstone used for the carved work in both buildings is the same. It is therefore the more remarkable that, while the castle is a purely native or Gothic building practically in all its features, the tomb, while remaining Gothic in its general conception and main lines, should display so much Renaissance influence in its details. We thus obtain a glimpse of a designer-craftsman at once vigorous and supple, capable of expressing himself both in the vernacular and in the new quasi-classical idiom which during the reign of James VI was beginning to make itself felt alike in ecclesiastical and in domestic building.

A fortunate chance has preserved our master-mason's name. On 21st May 1600 the Presbytery of Ellon visited Udney, where a new church was being erected. The reverend visitors found themselves confronted with a situation of some perplexity. Funds had run out, and the mason, Thomas Leper, was refusing to proceed unless he were paid in full. Udney of Udney and Forbes of Woodland came to the rescue, and agreed to advance the money provided the parishioners repaid them by Martinmas, and on the understanding that the mason finished the job *quam celerrime*. The Laird of Tolquhon, it appears, had some building to do, and was bargaining with Thomas Leper thereanent. So the minister of Tarves, Mr Thomas Gardyne, was appointed to interview the laird and to obtain his consent not to fee the mason until the kirk was completed. The following is the full text of the relevant entries in the Minute Book of the Presbytery of Ellon²:—

¹ See Dr William Kelly's discussion of this monument in *Logan's Collections* (Third Spalding Club), pp. 155-8.

² I am indebted to the courtesy of the Rev. Dr John Campbell, Curator of the Church of Scotland Records, for most kindly depositing the original volume in the Library of Aberdeen University, so as to enable me to transcribe this entry. Cf. T. Mair, *Ellon Presbytery Records*, p. 14.

"The visitation of ye kirk of Udney At Udney 21 Maij 1600.

* * * *

Building of ye kirk of Udney. The same day touching the ending of the mason wark of the kirk quhairas Thomas Leper wil not entir to the wark until he be completly payit It is agreit upon be the Laird of Udney and Mr. James Forbes that be their moyan thay sal find out the sum being fourseoir merkis And pay the profiet upon it until Martinmes nixt that the same be collectit out of the heddes of the parochinaris provyding the said Thomas get sufficientlie cautioners not to leave the wark until the ending of the same. And to the effecting heirof Mr. James Forbes and Mr. Thomas Gardin sal conveyin with the Laird of Udney upon Monndeday nixt at Udney to the quhilck dyet the said Thomas to be convenit.

Commissioun til Tolquhone. The quhilck day for als mekil as it is reportit that Th. Leper is in hand with the Laird of Tolquhone for entering to his wark a commissioun is gevin be the Laird of Udney, Mr. James Forbes hail parochinaris and presbiteri till Mr. Thomas Gardin to desyre Tolquhon not to entir in conditionis with the said Thomas Leper until he accomplisshes the kirk wark according to his contract."

The laird of this date was not William Forbes, builder of the castle, who had died in 1596, but his son, also William. The castle was erected, as its inscription informs us, between 1584 and 1589; but this extract from the Presbytery record tells us that work was still going on. Perhaps the fore-court was now a-building. That Thomas Leper had been the architect of the main castle is proved by his initials, T. L., still to be seen on the skew-putt of the turret gablet in the inner court.

As I have formerly pointed out, the close resemblance in plan between the main building of Tolquhon Castle and the neighbouring House of Schivas,¹ and the presence in both of the characteristic ornate and sometimes triplet gunloops, make it certain that Schivas also is a work of Thomas Leper. Even the nasty trick of the gunloop in the stair turret, plunged so as to command the main door, is common to the two buildings. It is probable that we may recognise Leper's work also in a third building nearby—the vanished castle of Dumbreck: for among the carved fragments built into the farm buildings at the Mains there is the left-hand orifice of a triplet gunloop of the characteristic Tolquhon pattern.² By contrast, a different

¹ See J. Fenton Wyness in *Proceedings*, vol. lxiii. pp. 384-91; also *The Book of Buchan*, 1943, pp. 213-40.

² Similar triplet gunloops, but very crudely wrought, are found in the round tower of Ellon Castle. These are certainly not by Thomas Leper, but may have been imitated from his work.

hand, we must surely think, will have wrought the crudely designed gablet skew-finial, in the form of a head-mask, with a fleur-de-lis in the gablet, built into the steading at Nethermill of Tillyhilt, which is one of the few surviving fragments of Tillyhilt Castle. At Uppermill, a short distance to the west, two more stones from Tillyhilt Castle are built into the steading. One appears to have been the projecting lintel of a dormer window, and displays in fanciful raised lettering with flourished serifs, the inscription I G . 1583 . R G. The other, a door lintel, is now much worn, but appears to bear the inscription, also in raised but plainer lettering, A N . W G . 16—: the date being no longer legible. These three stones from Tillyhilt Castle are all in the local pink granite. None of them has the least resemblance to any carved work at Tolquhon. Further afield, the site of Lesmoir Castle, near Rhynie,¹ has yielded two red sandstone figurines, one a half-length portrait of a gentleman putting a weight, now at Craig Castle, and the other, also a half-length gentleman, now at Crathes Castle, whose kinship with the Tolquhon sculptures leaps to the eye. Bearing in mind that the builder of Tolquhon took his wife from Lesmoir, we cannot be amiss in believing that Leper did work at that castle also.

So far as I am meantime aware, Thomas Leper has left no other trace in written record. Whence he came we do not know: but the two buildings which are certainly his work are so highly individual and distinctive in their style, that I cannot but feel convinced he was an Aberdeenshire man. At all events, he is not unworthy to take his place beside his contemporaries, the Bells, that great family of master-masons to whom we owe some of the most glorious of our latest Aberdeenshire castles.

Before leaving Tolquhon Castle, one or two further notes may be set down in amplification or correction of my former account. Mr Medd's plan of the first floor of Preston's Tower was unfortunately incorrect, and a revised version is reproduced herewith (fig. 1). The fine heraldic stone (Pl. XX, 2) found amid the ruins of this tower bears the coat of arms of Sir John Forbes, the first laird of his line—the cross-crosslet being added to the Forbes bearings as a maternal difference, a charge taken from the arms of his mother, Margaret Kennedy of Dunure.² The large mason's mark on this stone recurs on the aumbry in the tower hall. It may therefore be accepted as reasonably certain that the tower was built by Sir John Forbes after he succeeded to the property in or later than 1420, and not in the time of the Prestons.

Although smaller, this "Auld Tour" at Tolquhon has a considerable resemblance to the tower at Pitsligo Castle, which is stated to have been built soon after 1424 by Sir William Forbes, first of Pitsligo, and elder brother of the first Forbes laird of Tolquhon. At Pitsligo the tower hall

¹ *Proceedings*, vol. lxxi. 86-101.

² This was pointed out in an unsigned contribution to *Bon Accord*, 13th July 1939.

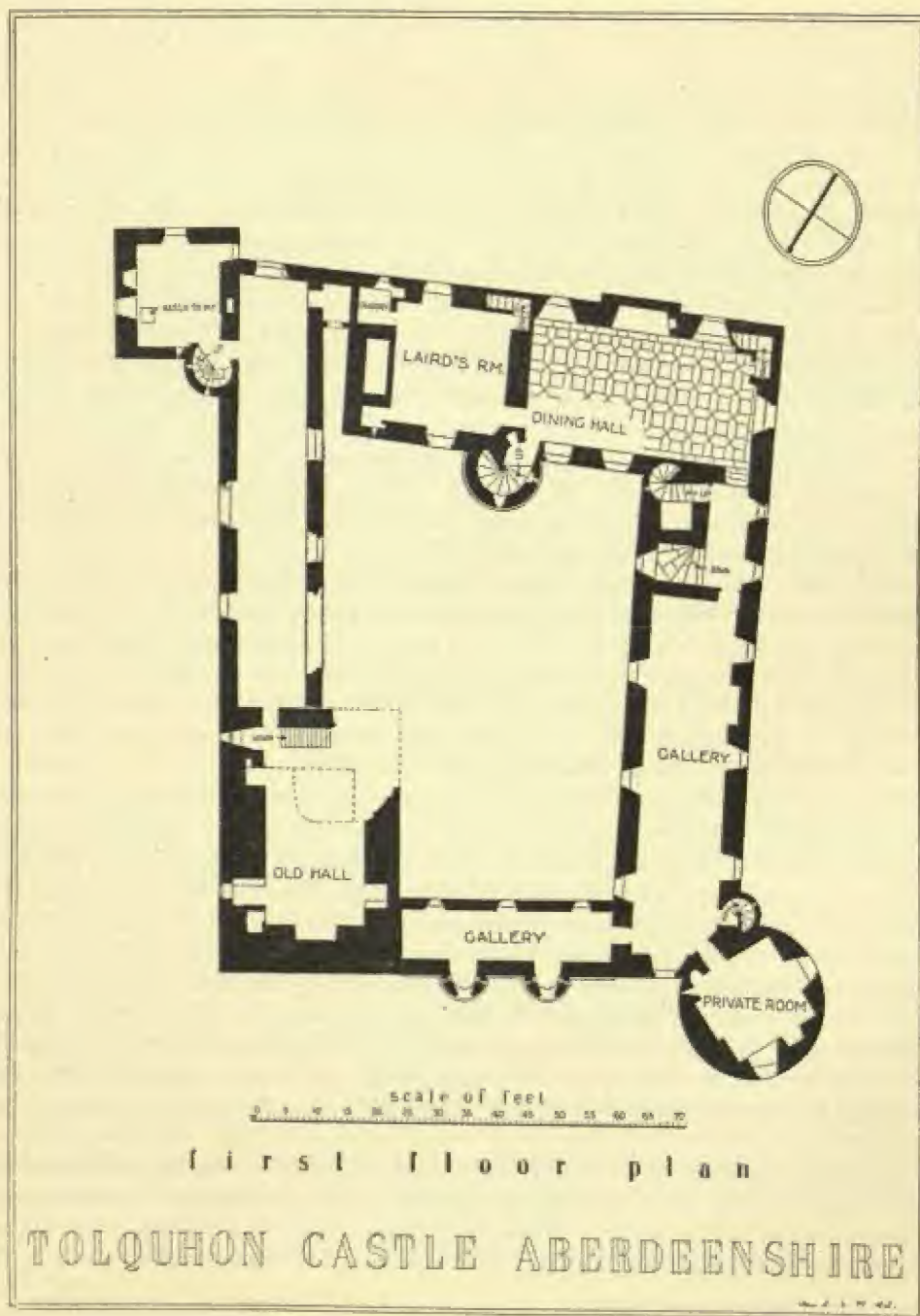


Fig. 1. Corrected Plan of Tolquhon Castle.
(See *Proceedings*, vol. lxxii. p. 271.)

is vaulted. I suspect that this was the case also at Tolquhon, and that the collapse of the vault led to the downfall of the tower.

Against the south wall of Tarves kirk are set up four seventeenth-century monumental slabs of much interest. The first of these, in the same perdurable red sandstone used for the Tolquhon Aisle, measures 5 feet 5 inches long and 1 foot 11½ inches broad. In the centre of the upper part is a shield of florid design, bearing arms: ermine, on a fess a boar's head between two crescents. On either side are the initials T. C. and M. R. In the lower half of the stone are a skull and a single bone. A band running round the stone bears the inscription: HEIR . LYIS . THOMAS . CRAIG . PVRSEANT . QVHA . DEPAIRTIT . YE . 19 . OF . MAII . 1584 . AND . MARIORIE . RIDELL . HIS . SPOVS . QVHA . DEPAIRTIT . YE . XV . APRILL . 1583. The lettering is incised, and the shield is sunk, the charges being left flush with the surface of the slab, so as to give the effect of low relief. In the same way, the skull and bone are set in a sunk circular panel. On the inscription, the "N" in PVRSEANT is of course a mason's mistake for "V"; and the "5" in the first year has been destroyed by damage to the stone.

On the left of this monument is another slab, also in the same freestone, and of closely similar design. It measures 5 feet 5 inches long and 1 foot 8½ inches broad. The florid shield again bears the Craig arms, flanked by the initials W. C. and M. R., and below are a skull and bone incised, but not in a panel. The inscription incised round the edge reads thus: VLTIMA . DOM' . GVL . CRAIG . ROSÆI . HERALDI . ET MARIORIE . REITH . ET' . SPŌSAE . QVĀ . SIBI . ET . SVIS . IN . DIĒ . RESVRECTIONIS HIC . REQUIETVRIS: PROVIDERV̄T . 1617. The two middle letters in the word "RESVRECTIONIS" are lost through the breaking out of a fragment of the stone. The lettering is much ligatured.

As to these early members of the College of Heralds, the Lord Lyon has been good enough to write the note which is printed at the end of the present paper.

Next to these two stones are a couple more slabs, similar in general form but made out of a coarse granitoid rock with abundant black mica. These stones have weathered badly, and the inscriptions can be fully read only in a bright slanting sunlight, early or late in the day—though then indeed they are almost quite clear.

The first of these stones measures 5 feet 9½ inches by 1 foot 10 inches, and displays two heater-shaped shields, one above the other, in good relief, each terminating below in a peculiar elongated ogee point. The inscription, is incised on a band running round the slab, and carried in a second line across the upper shield. Its tenor is as follows: HEIR LYIS . MAISTER .

THOMAS . GARDYNE MINISTER AT TARVES . QVHA . DEPARTIT .
THE . . . DAY OF . . . 163 . . . The missing portions of the date cannot now be made out. Thomas Gardyne was minister at Tarves from 1593 until 1633. It was he who was deputed to wait upon the Laird of Tolquhon in the affair of Thomas Leper. The upper shield bears the arms, a boar's head erased, for Garden. The lower shield is now illegible.¹ On either side are incised, in a different style of lettering from that of the main inscription, the initials W. L. Below the second shield are a skull and a single bone, set in an arched recess.

The second slab measures 5 feet 6 inches by 1 foot 10 inches, and has a shallow edge-roll. Before the stone was carved, the lower dexter corner had been broken away, and the moulding is carried round the canted angle. The incised inscription is arranged in the same way as on the Gardyne stone. On the face are displayed a shield and a skull and bone, both within sunk rectangular panels, of which the lower has rounded edges. The shield is of the same peculiar form as that on the companion stone. It bears the Chalmers arms, a demi-lion rampant issuant from a fess. The inscription reads: HEIR LYIS AG . NES . CHALMER . AND ISBEL . CHAL . MER, SPOS . TO . M . T . G . QVHA DEPERTIT . THE 20 NO . VEMBR. No room was left for the date, which was never carved. Isobel Chalmer was Mr Thomas Gardyne's wife, and Agnes no doubt was her sister.

Beside this group of upright monuments is a fourth, built longwise into the foundation of the church. It measures 3 feet 3 inches long; the breadth cannot be ascertained. On the slab, which is of granite, and quite plain, are incised, in bold, well-formed letters and figures, M. R. 1613.

This paper, which has dealt with ancient monuments in the village of Tarves, may conclude by recording an inscribed granite lintel, showing a 2½-inch chamfer, which has been reused on a door (now converted into a window) in the Aberdeen Arms Hotel. It bears the incised legend: 16 . I 4 R . 77.

NOTE BY SIR THOMAS INNES OF LEARNEY, LYON KING OF ARMS.

Practically nothing is known about these Craigs, but the arms suggest there was a material connection with Gordon—or Garden.

William Craig was Rothesay Herald by 1607, and is noticed in Aberdeen Sasines 1st November 1602, and referred to 5th March 1623 and 8th October 1626.

¹ According to Andrew Jervise (*Epitaphs and Inscriptions*, vol. ii. p. 352), the arms were: Keith and Young, quarterly. The Keith pales can still be seen in a good light.

XII.

JACOBITE RINGS. BY R. B. K. STEVENSON, M.A.,
F.S.A. SCOT., KEEPER OF THE MUSEUM.

The following discussion is primarily concerned with the ring formerly in the possession of the Setons of Touch, which has been generously presented to the National Museum by the National Art Collections Fund (see p. 153). But we shall be better able to assess the circumstances and date of its manufacture if various other Jacobite rings are taken into account.

1. *Seton Ring*.—This ring was considered by Prince Duleep Singh in the *Connoisseur* for June 1907, though it had not been mentioned among the relics preserved at Touch when these were described by George Seton in his *History of the Family of Seton* (1896). The hoop (fig. 1) is of four

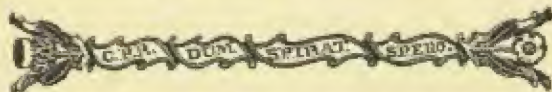


Fig. 1. Seton ring: extended drawing of the hoop and shoulders. (q.)

scrolls, and has the following inscription in reserve on white enamel C.P.R./DUM/SPIRAT/SPERO, the initials standing for Charles Prince Regent. The shoulders bifurcate, and bear on the dexter side of the bezel a five-petalled rose, enamelled white with five green sepals and pistils reserved in gold, flanked by two green leaves, and on the sinister side a thistle in red, white, and green enamel with reserved detail, also flanked by two green leaves of the right shape. The bezel is oval, its back reeded in two fan-shaped panels, and has minute pellets at intervals round the edge. It contains a bust of Prince Charles Edward in relief on a gold or gilt medallion beneath a crystal with faceted border (Pl. XXI). The crystal measures 14 × 11 mm.

2. *Loval Ring*.—An enamelled mourning or commemorative ring presented to the Museum in 1939¹ is of similar style and alike in some small details. Its five scrolls are larger and simpler, and separated by small unenamelled panels bearing three oblique ridges in relief. The inscription reserved in white reads SI^N: L^D/LOVAT/BE^D: 9/APR. 1747/Æ: 80. On the inside of the hoop the scrolls are not completely rounded as in the Seton ring, but flattened to bear the inscription *Dulce et Decorum est pro Patria Mori* engraved in italics. The shoulders bifurcate and are shaped as in the Seton ring, but surmounted by pear-shaped crystals set in silver. The bezel, again like the Seton ring in conception, has a similar reeded back and pellets round the edge, but is nearly square with bevelled corners. The crystal,

¹ *Proc. Soc. Ant. Scot.*, vol. lxxiv, p. 149.

also similarly cut, 8×7.5 mm., covers a small rectangle of twisted gold wire, below which there appear to be some hairs.

3. *Lyon Ring*.—Another Jacobite mourning ring was most kindly brought for me to see by Miss M. C. Bruce, in whose possession it is. The hoop consists of four black-enamelled scrolls separated by ridges in relief. The reserved inscription refers to the incumbent of the Episcopal Church¹ in Perth, who served as chaplain in Lord Ogilvy's regiment and was hanged at Penrith M^B ROBT : /LYON : E : S : P./28 : OCT^B 1746/ÆT : 36 : (a skull). Engraved on the inner side is PRO ↓ REGE ↓ & ↓ PATRIA ↓ TRUCIDATO. The bezel, rectangular with no pellets, contains under a crystal a few hairs with red dots over them (for blood ?). The back is reeded like the foregoing but the shoulders are not forked or decorated. This ring is illustrated opposite p. 98 of Canon C. I. K. Bowstead's *Facts and Fancies about Kilmareonaig* (1915).

4. *Flora Macdonald's Ring*.—Recently Mrs J. B. Innes lent to the Museum a ring which is of considerable sentimental as well as intrinsic interest. It has been handed down by known stages from Flora Macdonald, who is believed to have got it from the Prince. The history of its descent was written down in 1891 by Mary Macdonald, then aged eighty-seven, daughter of that Dr Kenneth Macdonald who accompanied Flora to America. This ring is well worn and much of the enamel is gone. The hoop is of three scrolls separated by ridges in relief; on the first and third is the inscription reserved on white LOVE AND/HONOUR. The shoulders bifurcate and bear the Prince of Wales' feathers, enamelled white, rising through a coronet. Between these and the scrolls there is on the dexter side a very small and unnatural four-petalled white rose with gold pistils and sepals formerly enamelled. The stem is S-shaped, two leaves forming with it a figure of eight. In the same position on the other side there is a thistle with similar stem and leaves. The bezel is oblong with bevelled corners, and contains a simply-cut crystal, having a few fine strands of hair beneath. The stone seems to have been reset, perhaps to allow the hairs to be substituted for some device. The back is reeded in two fan-shaped panels, but in the centre is a large oval containing a lyre reserved on a blue ground within a scrolled border.

5. Another similar ring inscribed LOVE AND HONOUR was, according to the late Mrs Robertson Matheson, given by James (VIII) to a faithful follower, and has J.R. under the crystal. It has not been found possible to trace its present whereabouts.

6. *Laurence Oliphant's Ring*.—A ring resembling closely Flora Macdonald's was given by the Prince to his aide-de-camp, Laurence Oliphant of Gask, who followed him into exile. It is in the possession of his descendant Mr R. S. Barbour of Bonskied. The two rings actually differ in a number

¹ *Ecclesiae Scotieanae Presbyter.*

of particulars, as Mrs G. F. Barbour has kindly informed me. The Oliphant ring has only two scrolls in the hoop and no inscription. The oval stone is yellowish, and has under it the letters C.P.R. in gold wire, surrounded by an oval gold chain border. The instrument on the back is a harp.

7. *Four Peers Ring*.—The Oliphants are further connected with an enamelled ring differing in many ways but also incorporating a rose and thistle. The family tradition regarding the ring belonging to Mrs Maxtone Graham and illustrated in our *Proceedings* (vol. lvii. p. 233) is that it was made by Ebenezer Oliphant, brother of the Laird of Gask and uncle of the Laurence Oliphant just mentioned. He was the Edinburgh goldsmith who in 1740 made the magnificent canteen of silver designed to be carried in a holster and bearing the badge of the Prince of Wales and of the Order of the Thistle, now in the possession of the Earl of Albemarle.¹ The ring commemorates the executions in London in 1746 and 1747: four noblemen, including Lord Lovat, were beheaded on Tower Hill, and seventeen officers, ten of them belonging to the Manchester Regiment, were executed at Kennington Common.² As in the Seton ring, though perhaps the work is less fine, the bifurcated shoulders bear the white rose and thistle in natural colours. (In the *Proceedings* illustration the rose has been drawn twice in error.) The inscriptions are reserved in white enamel. Here the resemblances cease, however, since in order to carry the initials of all the officers, with dates of execution, the hoop consists of two entwined bands. Initials of the peers and dates and an executioner's axe figure on the bezel, which takes the form of an oblong panel with six hollow sides. At the four corners there are gold coronets. It is nearly flat at the back, and the outline of the upper surface is continued down the sides, which are deeply indented.

8 and 9. Two other examples of the Four Peers ring are known to me. One belongs to Colonel Stirling of Kippendavie, having come down from his great-grandmother, Mrs Graham of Airth; a connection with the Oliphants is again possible. The other is in the British Museum, and was described in Dalton's *Catalogue of Finger Rings* (1912—No. 1417).

10. Lastly, there is in the West Highland Museum at Fort William an unenamelled gold ring containing a medallion like that in the Seton ring. The setting is unattractive; the oval bezel is too large for the medallion, which has therefore been surrounded with a copper-coloured frame ornamented in relief. On the back of the bezel is engraved in italics *Dum Spirat Spero 1745* around a circular hole which was perhaps intended for hair. The rather small hoop is very thin and twisted like a rope. The ring was presented by Mrs Keith Cameron in 1928.³

¹ *Catalogue of Loan Exhibition of Jacobite Relics*, Edinburgh, 1946, No. 325. Rings 6 and 8 are Nos. 295 and 104 in the same *Catalogue*.

² Scottish History Society, *The Prisoners of the '45*, vol. I. pp. 146 ff.

³ Miss E. Macgregor kindly drew my attention to it.

It will be obvious from the foregoing descriptions that enamelled gold rings, of various designs but having details in common, were a feature of what might be called Jacobite propaganda. Mourning rings with names, and so on, in reserve on white or black enamel, often in scrolls, were normal in England in the decades before and after the '45, as can be seen from the British Museum and Victoria and Albert Museum Catalogues of rings. An ordinary Scottish example was recorded in *Proceedings*, vol. lxxiv., preceding the Lovat ring. But the adoption of the same style for other purposes as well seems peculiar to the Jacobites. The number of rings made to each of their designs may have been quite numerous, since in two cases three examples at least survive, and both the Prince's A.D.C. and his fair rescuer received closely similar rings, one having an appropriate inscription which was, apparently, not specially made for her since it is duplicated. We should not suppose that a single maker made the various designs. Differences in the drawing of the flowers suggest that similarities of detail are due to copying an original production, which had "caught on."

Sometime in 1747 is the earliest possible date for the manufacture of those that commemorate executions subsequent to the '45. It is less easy to determine whether or not the undated rings were gifted by the Prince during the actual Rising. It has been thought that the Seton ring, for example, was given by the Prince on his visit to Touch during the '45. On the other hand, Duleep Singh suggested that it was "presented to his loyal host when safe from his murderous pursuers," and Andrew Lang in his *Prince Charles Edward Stuart* (p. 310) seems to suppose that Flora Macdonald was also given her keepsake at a later date. Indeed it is extremely incongruous to conceive of Prince Charles carrying numerous rings (and medals, see below) round with him in his campaign, to be presented to supporters who were surely flushed with the hope of more notable tokens of success. It is in particular most unlikely that the motto *dum spiro spero*, which suggests that all but life is lost, should have been adapted to apply to the Prince at any time before Culloden.

Further evidence tending to the same conclusion is provided by another feature of the Seton ring. Our own Museum and the British Museum each possess a specimen of a tiny gold medallion identical with those in the rings, down to a small bar-like mark on the neck. The British Museum specimen was published by Hawkins in his *Medallic Illustrations of British History*, vol. ii. p. 601, No. 253, with the suggestion that it was struck about the time of the Prince's arrival in Scotland, but doubt was cast on this view by Miss Helen Farquhar's paper on "Some Portrait Medals Struck between 1745 and 1752 for Prince Charles Edward."¹ The first of a number of similar medallic portraits was the *Amor et Spes* medal. It bears the date 1745 and was formerly attributed to Pingo. Miss Farquhar showed that it was really

¹ *British Numismatic Journal* (1923-24), vol. vii.

made by C. N. Roettiers in the mint at Paris in 1748, and she considered the tiny medallion to be so closely allied to this medal that she would "hesitate to deprive Charles Roettiers of the honour of its execution." Clearly the reasons which led to the various medals being struck from 1748 onwards were such as might include the manufacture of rings in which the medallions were no doubt all intended to be set.¹ In fact Miss Farquhar also quotes a contemporary mention of "small heads of silver gilt to be set in rings" being carried from Paris to London in 1750; unfortunately their type is not known. The date on the ring at Fort William we may accordingly take to be purely commemorative, like that on the medal.

The context of the various rings therefore seems to be the two or three years before 1750, not earlier. The tiny medallions were doubtless made in France, and the fine workmanship of the Seton ring at least suggests its origin in the same country.

XII.

FURTHER OBSERVATIONS ON HUT-CIRCLES.

By WALLACE THORNEYCROFT, F.S.A.Scot.

Since submitting my observations on hut-circles and Circle F, Dalrulzion in particular, in 1932, more work has been done.² Two more of the many cairns of stones near the hut-circles have been turned over and again nothing found, so that I think it is safe to say that all these cairns are the result of clearing the adjacent ground for agricultural purposes.³

Many more hut-circles have been brought to my notice in the district. A pair of tangential type hut-circles Q and Q¹ have been excavated. They were built on the slope of the hill (see plan and sections) and, like Circle F, the entrance to Circle Q was to the south-east lined with stones set on edge and paved to well within the area enclosed by a somewhat oval ring of heavy stones, also set on edge. Those still in place are shown solid black on the plan, and those fallen, dotted in their approximate position.

Unlike Circle F, the outside limit of the single wall was ill-defined, and it appears that the builders first levelled a circular area in the sloping ground to about the level of the entrance and with the material excavated (soil and disintegrated schist) formed a bank round it, leaving a gap for the entrance. They then erected on edge large flat stones quarried from an adjacent outcrop, and behind these on the bank and higher surface of the

¹ I have been unable to trace the ring specifically mentioned by Miss Farquhar as containing an example of the small medallion. Though it was exhibited at Fort William in 1925 (Catalogue No. 139) it was sent by a Mr John Stuart and is not likely to be the same as the one listed here as No. 10, for the latter is not said to be associated with James (VIII).

² *Proc. Soc. Ant. Scot.*, vol. lxxvii, p. 190.

³ *Ibid.*, vol. lxx, p. 105.

slope they built a very rough wall of loose stones gathered from the adjacent ground (see Sections AB and AC). There is no outer wall or annular space as in Circle F.

On the north-east side, this wall of loose stones blended with the wall of the tangential Circle Q¹ and at the south-east junction of the two at the lower part of the slope of the hill; the building was of better quality and quite distinctly founded on the undisturbed ground.

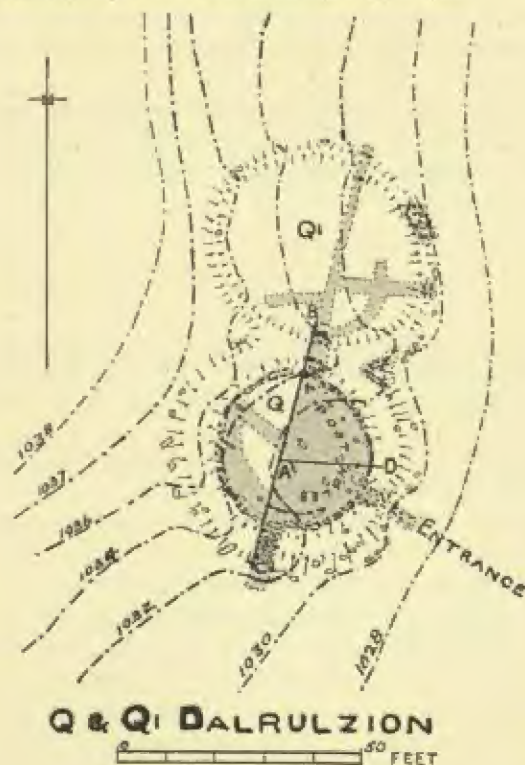


Fig. 1. Plan of Dalrulzion hut-circles.

Inside the ring of stones on edge of Circle Q below the turf there was a black layer 3 to 4 inches thick extending over the whole area. Two feet or more inside and roughly concentric with the stones on edge were a number of post-holes sunk into the undisturbed ground and containing fragments of charcoal (mostly hazel), some clay and definite packing stones. There was no large hearth-stone as in Circle F, but near the entrance there were red stones obviously heated by fires, and near the centre was a large flat stone unheated which may have been the foundation for a central post.

Below this upper black layer there was a layer of brown sand frequently having an irregular thin rusty red layer resting on it, sometimes quite hard.

Dr Ogg, of McAuley's Institute of Soil Research, visited the site and explained to me that this was "iron pan", formed by a process in soil formation.¹ The brown layer is part of the lower black mould leached by this process.

Inside the ring of post-holes below the brown sand was another layer of dark mould. In and on all these three layers we found pottery, bones, and considerable quantities of "daub" (burnt clay with impressions of twigs), especially in the south section, and on the top of the upper black layer

SECTIONS AB, AC, AD, HUT CIRCLE Q DALRULZION

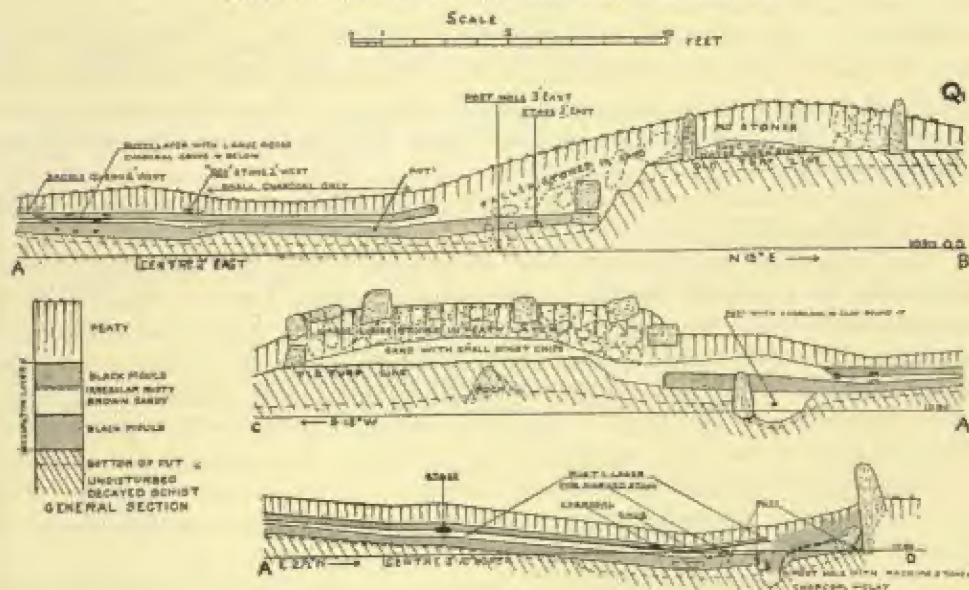


Fig. 2.

there were many large pieces up to 4 to 6 inches diameter and 24 inches long of charcoal or decayed wood, birch; the small pieces were mostly hazel and a few bits of oak.

It is therefore clear that inside this hut-circle there had been erected at some time a wattle-and-daub structure which may have been roofed. This may have extended through the entrance, as a piece of "daub" was found under one of the fallen stones on edge there.

The method of roofing these hut-circles, if there was a roof, and in particular whether or not a central pole was necessary to support a roof, is of interest.² There was no evidence of a roof over Circle F, but it may be that the narrow annular space formed round it was covered and that the occupiers used this space for shelter.

¹ Cornber, *Scientific Study of Soil*, 2nd Edition, p. 50, and Robinson, *Soils*, pp. 205-212.

² *Proc. Soc. Ant. Scot.*, vol. lxx. p. 247.

I have collected evidence of circular huts built by primitive natives in Africa. Some near Sierra Leone are not unlike Circle F in general design. They have an annular space round a central living-room and are roofed without a central pole. The outside diameter of these is 25 to 30 feet, and the roof is thatch carried by light rafters, the thrust of which is taken by a strong rope-like band made of tropical creepers (lianes), and supported by vertical posts covered with wattle and daub. A similar rope-like band could be made in this country by branches of hazel.

The inside circular wall, about 15 feet in diameter, is also built of wattle and daub, and is carried up to within two feet or so of the thatch to provide ventilation; the doors are arranged to allow a through draught. The annular space, sometimes completely covered in, is used for various purposes, the front being a verandah used by the owner. Other and simpler types of circular huts can be seen in most parts of Africa, generally without a central pole.

No sign of wattle and daub or large pieces of charcoal or decayed wood were found in Circle F.

The trenches cut through the tangential Circle Q¹ disclosed a few fragments of charcoal on the undisturbed ground, but no distinct dark occupation layer. The wall of Q¹ was defined by a low bank and a few loose stones to the north and east, and more stones to the south on the lower slope of the hill. It must have been formed largely of turf. Some small post-holes concentric to the bank were found containing dark earth and a little charcoal, and in one case a fragment of pottery. No entrance was located.

Many pottery fragments were found in the southern section. The pottery included many bits of rim and bottom, and matched that found in Circle F of both A and B types.

Two broken saddle querns were found, and one good rubbing-stone and a good hammer-stone. These were left on the site.¹ Other stones noted were a thin and almost polished piece of schist which must have been used for some purpose, two large granite boulders and a number of water-worn pebbles, some of which are fire-marked, probably cooking-stones; many pieces of white quartz as in Circle F and another very good example of "rodding structure" schist. The fact that a specimen of this peculiar structure was found in both circles excavated seems to me to indicate that prehistoric man valued them; I have so far been unable to locate where he found them. No metal was found.

Last, but not least, Miss Liddell succeeded in separating a grain of corn from the black occupation layer, which Dr Orr identified as barley (*Hordeum*) and probably "bere". She also found one in Circle F.

The date of occupation of these hut-circles in Perthshire is variously

¹ One of the querns was very like fig. 4, pl. 11 (*Antiquity*, June 1937, in article on "Querns" by Cecil Curwen).

estimated by experts as between 200 B.C. and A.D. 200, but I am not satisfied that we have yet sufficient evidence to fix the date. The best hut-circles D, E, F near the Rocking-stone, Dalrulzion, are still intact.¹

My thanks for assistance are due to Dr Margaret Mitchell (now Mrs Stewart), Dr Orr, Dr Ogg, and Professor Childe and others, and especially to the late Miss Dorothy Liddell.

XIII.

A SHELL-HEAP AT POLMONT HILL, FALKIRK. BY R. B. K. STEVENSON, M.A., F.S.A. SCOT., KEEPER OF THE MUSEUM.

Attention was drawn about the middle of January 1940 by Mr Samuel Smith, Corresponding Member of the Society, to the exposure of a large

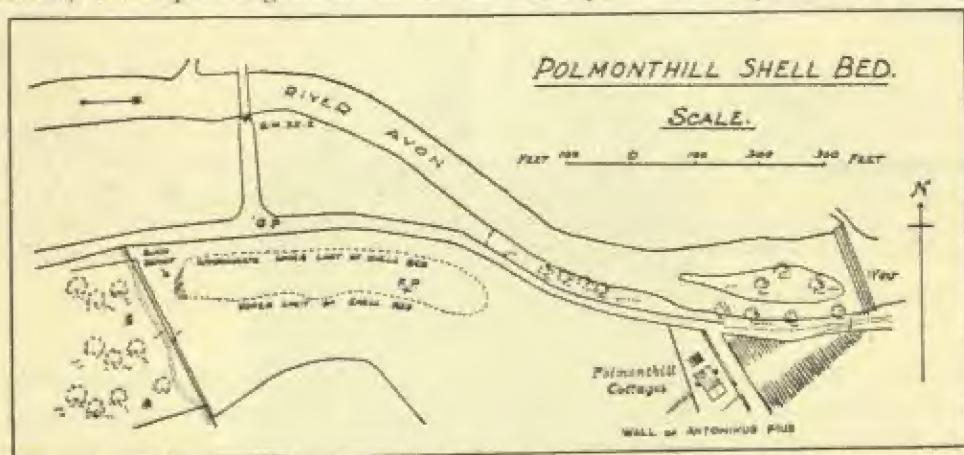


Fig. 1. Plan of Polmonthill, showing the position of the shell-heap.

shell-heap by a mechanical excavator digging a clay pit into the hillside on the farm of Polmonthill, near Falkirk (O.S. 6" Map (1921), Stirlingshire, Sheet No. XXXI. N.W.). The site was visited several times by Mr W. Manson, of H.M. Geological Survey; Dr M. Macgregor and Dr J. B. Simpson, both also of the Survey, accompanied him on one occasion. On the three occasions that I visited the site, in the middle of January and the middle of February, the ground was frozen hard; at points, indeed, the face of the pit was thickly coated with ice. This prevented any archaeological excavation of the pit—for which kind permission was received from Messrs Crowley & Russell, Contractors, Glasgow—but unfortunately did not seriously retard the working of the pit, so that the shell-heap was entirely removed before the thaw came (fig. 1).

The heap was situated on the left side of the River Avon, where it debouches on to the Carse. It was approximately 25 yards wide, and ran for 170 yards along the gentle lower slope of the hill overlooking the Carse, its upper edge nearly coinciding with the foot of a fairly steep bluff. It may be said that the base of the heap lay on an incline rising from 32 to 47 feet O.D. Two or 3 feet of soil washed down the hillside covered the layer of shells, which had itself a thickness of 3 to 4 feet in the centre, and occasionally more. Immediately below this was the surface of the boulder clay, strewn in parts with a layer of stones weathered or eroded out of the clay. Besides smaller pebbles there were boulders, sometimes of consider-

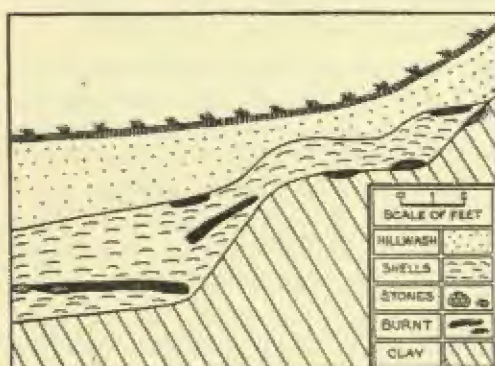


Fig. 2. Composite section through back of Polmonthill shell-heap.

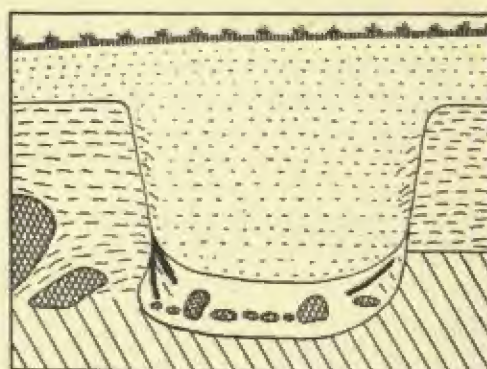


Fig. 3. Pit in Polmonthill shell-heap.

able size. It appears that the shells were heaped on to the beach of the Firth of Forth at the Avon mouth when the sea was, relative to the land, some 30 feet higher than at present (Pl. XXII, 1). The layer of shells rose at a gradient of approximately 1 in 5 to the upper part of the beach, where the spread of stones was almost entirely absent, and piled up against a steep bank, which at one point, where the section was cleared by Mr Smith, rose $3\frac{1}{2}$ feet in 3 feet. While the shells were accumulating, slips of earth from this bank had covered some, and then further shells accumulated on top. At some points the shells tailed off rapidly at the top of the bank and ceased after a few feet; but at the place shown in the composite section (fig. 2), in a small cut made with great difficulty by Mr Smith, the heap continued nearly horizontal for a couple of yards and ended banked up against another steep rise. It may be suggested that the main bank marks the head of the beach. The significance of the local level strip above, with a secondary heap, is however not clear.

The vast majority of the shells were oysters (*Ostrea edulis* L.), of which there were perhaps six or seven million valves. But there were occasional



1. Polmonthill: shell-heap overriding a dune on the old beach.

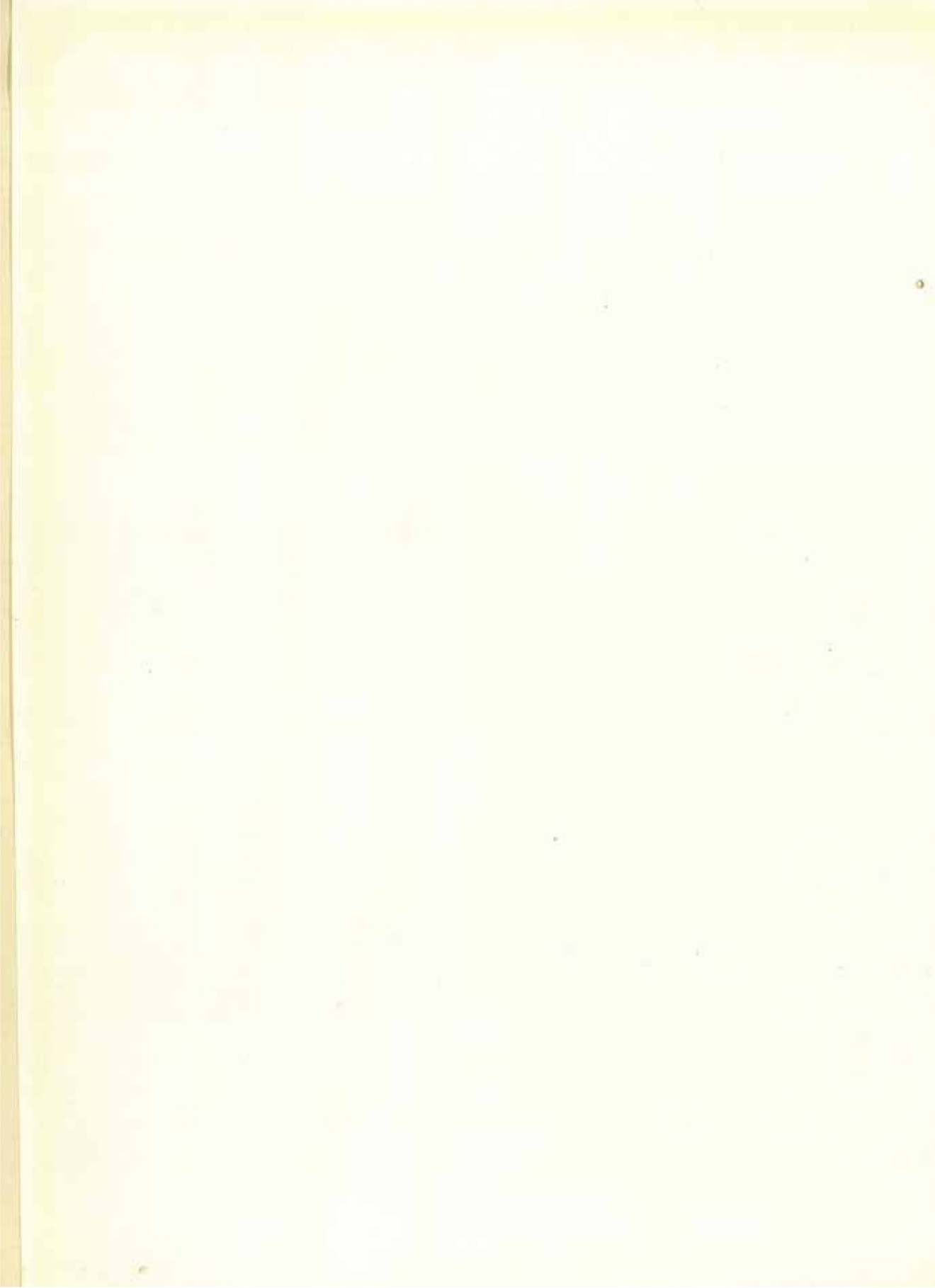


2. Superimposed hearths: the pick resting on the lowest, the trowel in the topmost; the ruler marks the base of the shell-heap.

R. B. K. STEVENSON,

A SHELL-HEAP AT POLMONTBILL, FALKIRK.

[To face p. 136.



mussels (*Mytilus edulis* L.) and winkles (*Littorina littorea* L.), cockles (*Cardium edule*), and a few buckies (*Buccinum undatum littorale*, King). The oysters consisted of single valves lying flat on top of one another; excepting for an occasional isolated stone and, at one point, a thin streak of sand, there was no admixture of sand or pebbles, such as there would have been if the shells had been deposited by the sea. The strongest evidence, however, to show that the heap was actually a prehistoric midden was the amount of burnt material to be seen, consisting of thin layers undisturbed by sea action and sometimes containing distinguishable scraps of charcoal. One of the layers, with 6 inches of shells between it and the beach pebbles, started from the western side of a very large boulder as if in a spot slightly sheltered from the east wind. In these burnt layers, but rarely elsewhere among the shells, were numerous stones, mostly burnt, while in some cases flat stones had been laid to form rough hearths several feet across. Near the southern, landward, edge of the heap the burnt layers became more numerous, and Pl. XXII, 2, shows four superimposed, the lowest being a regular hearth with its back (exposed later) against the bank at the head of the beach.

Beyond the edge of the shells, some of it uphill but more particularly beyond the western and eastern ends of the heap, was a spread of black matter, apparently burnt, up to over 1 foot thick containing no shells but numerous heat-fractured pebbles, some as large as two fists.

The small samples of charcoal from the hearths and one from the black spread have all been identified as oak.

A few hour's pecking at the frozen face of the exposure with a small pick, mostly in the neighbourhood of hearths, unfortunately failed to discover any worked or utilised stone.

Despite this lack of artifacts, the midden from its general character, its association with the "25-foot beach" just subsequent to the period of maximum submergence, and the oak charcoal, which would be in keeping with the Atlantic climatic phase, may be referred to the mesolithic period.¹

The heap just described is one of a series in the neighbourhood, all lying at about the same height above sea-level, including one on Mr Smith's farm of Mumrills a couple of miles westward. There are several accounts of these, the best being by J. Peach.² "A line of interesting kitchen-middens runs along the bluff for half a mile or so on either side of where the River Avon enters the Carse. A section across a heap fifty yards long by twenty wide was exposed in a road cutting, and showed many successive layers of shells—principally oysters—to a depth of three feet without the bottom being visible. The remains of fire-places were plentiful among the shells. Oysters seem to

¹ A similarly placed shell-heap, also without artifacts, was excavated at Rough Island, Strangford Lough: see *The Irish Stone Age*, p. 141, by H. L. Movius, who discusses British raised beaches very fully.

² Para. 109 of the Geological Survey's *Memoir to Sheet 31*, 1879.

have been preferred by the makers of the midden, though they had also used the *Anomia*, the big 'horse-mussel' (*Modiola*), the common mussel (*Mitylus edulis*), the whelk (*Buccinum undatum*), and periwinkle (*Littorina littorea*). Fragments of the large edible crab (*Cancer Pagurus*) were also present. All the valves of the oyster were separate except such as had been empty, which still had barnacles or zoophytes in their interior. The mussel and other shells were found in separate nests and not indiscriminately throughout the mound. Layers of sand were also found among the shells. All the middens observed occur on the bluff itself or just at its base, as if, when it was the limit of high water, the people who formed the middens, after searching the shores during low water, had retreated thither to enjoy their feast while the tide covered their hunting ground." The section described by Peach is possibly the same as that described by D. Grieve.¹ A side road from Inveravon Castle to the Bo'ness-Polmont road exposed a section of about 90 feet, with a maximum height of 5-6 feet, through a bank of shells on the east side of the Avon. Besides the very large oysters, consisting of single valves lying promiscuously, were mussels, cockles, winkles, razor shells, and a portion of *Tapes pullastra*. No sand, stones, or sea debris were intermixed, so that the shells were not sea-borne. There were a few streaks of carbonaceous matter, but no hearthstones, chiefly near the bottom and towards the lower end. A "causeway" was discovered, which he thought to have been a Roman road. The Vallum, however, lies further inland than he supposed, and Sir George Macdonald used to wonder if the "road" was its stone base; but Mr Smith suggests that it may have really been the shingle beach that was noticed.

Similar shell-heaps have been found elsewhere along the east coast of Scotland. At Stannergate, near Dundee, such a heap was separated from an overlying Bronze Age cemetery by seven or eight feet of earth.² Other heaps occur at the mouth of the Ythan, Aberdeenshire.³

The shell-bed near Kinneil, Bo'ness, described by Callander,⁴ and apparently the midden of a metal-using people to judge from the sawn antler tines found, was well below present high-water mark. It was, however, so close to the present channel of the Avon that there must be considerable doubt as to whether the antler fragments were really *in situ*.

There remains to be described briefly a feature in the shell-heap at Polmont which particularly attracted Mr Smith's attention, but which had to be removed before the bad weather allowed of a careful examination. As this was not anticipated, only a very rough sketch was made (fig. 3). A pit had been dug right through the shells and into the boulder clay. In the exposure it was 9½ feet across at the top of the shells, and its bottom was 7 feet below the same level. The upper 5 feet were filled with earth similar

¹ *Proc. Soc. Ant. Scot.*, vol. ix. (1870-71), p. 45.

² *Ibid.*, vol. vi. (1864-65), p. 423.

³ *Ibid.*, vol. xiii. (1878-79), p. 303.

⁴ *Ibid.*, vol. lxiii. (1928-29), p. 314.

to the hill-wash above the shells, and, in the circumstances at any rate, no distinction was possible. The sides of the pit were nearly vertical, and made a sharp angle with the top of the shells. There were oblique streaks of shells in the pit at various levels, for a few shells had slithered in from the sides as the pit was being filled up. The natural clay at the very bottom of the pit had been reddened as if by heat, and above this were 6 inches of red ash. Then came a layer of flat stones showing signs of burning. These sloped up from the face of the exposure, as if the section was nearer the south side of the pit than the centre, a supposition supported also by the slope of the clay at the bottom. Besides the flat stones there were two larger blocks. Above the stones was a foot or so of red and black burnt material, and black bands sloped steeply up the sides of the pit to about 4 feet from the top of the shells, from which came a few trickles of lime—burnt shells.

Speculation as to the purpose or date of this pit must be omitted, in view of the absence of artifacts and the lack of evidence to show how the sides were kept vertical. It may be noted, however, that the pit had been dug from above the top of the shell-heap (and is thus later than the heap) for it did not splay out at the top, that there were no shells in it except what few had come from the sides, and that red ash was visible nowhere else about the shell-heap. Finally there was a hollow on the surface of the ground, which may, however, probably be discounted as it was not coincident with the top of the pit as far as this could be estimated. The only suggestion of a remote date for the pit is its general character, and the fact that a sample of charcoal from the base of the black layer below the stones was oak, like the other samples from elsewhere in the shell-heap.

I must thank Mr Smith for much help, information and many suggestions; Mr R. A. Milligan for the site plan; Mr M. Y. Orr and Miss M. L. Platt for identifying respectively the samples of charcoal and shells.

NOTES.

1. AN EXAMPLE OF SCOTTISH MEDIEVAL POTTERY FOUND IN PAISLEY,
19TH DECEMBER 1938.

On 19th December 1938, whilst digging on the drying-green of a property at 64 Broomlands Street, Paisley, at the foot of the southern slope of Woodside Hill, a tenant unearthed a small earthenware jug. It was excavated from a depth of 12 inches, but as there had at some time been previous ground-levelling operations, the original depth may have been 3 feet. Although discovered near the site of the western outpost of the Roman station at Oakshawhead, certain features of construction precluded the possibility of a Roman origin. The shape, form of handle, slightly concave base with spiral wheel-marks inside and apparently underneath, the suggestion of rippling in the profile of the body, and the hard micaceous red fabric—with their continental flavour—are indications that it is an example of Scottish mediæval pottery of the thirteenth to fifteenth centuries. This conclusion has been confirmed by the National Museum of Antiquities, Edinburgh, and by the British Museum, London.

Such finds are by no means of common occurrence, and this jug has been acquired as an addition to the Archæological Collections of the Paisley Museum through the kindness of the finder and his brother, Messrs James and Alexander McDonald respectively. The specimen is on exhibition in the Museum (see Pl. XXIII, 1).

Dimensions:—

Height	2 inches
Diameter, including handle	3 ..
Diameter of body	2½ ..
Diameter of base	1½ ..

W. P. MAYES,
Curator, Paisley Museum.

2. A SMALL HOARD OF POLISHED STONE KNIVES AND A POLISHED STONE
ADZE FROM THE WARD OF SHURTON, NEAR LERWICK.

The Ward of Shurton is 3 miles west-south-west from Lerwick, the road to the south end of the mainland skirting its south-western slope. This hill rises to a height of 525 feet above sea-level, and on its highest point are the remains of a cairn, now so dilapidated that it is impossible to trace the original outline.

On the western slope, about 75 feet below the summit, continuous erosion due to the action of the elements has removed the turf and surface soil from an area approximately 60 feet by 25 feet and to a depth of 2 feet below the surrounding level. On this bare peaty patch a passer-by in 1934 discovered a hoard of fourteen polished stone knives lying together in a heap, all of which have been lost, except two, which are now in a private collection.



1. Jug of Scottish Medieval Pottery. (1.)



2. Polished Stone Knives from Shetland.



3. Polished Stone Adze from Shetland. (1.)

While walking over the hill in the latter part of May this year, I found a small hoard of five polished stone knives on the same patch. The knives were lying close together but not overlapping. Unfortunately one was broken into small fragments, probably by some passing animal. These knives are thin, flat, irregularly oval-shaped blades, highly polished on both sides, with sharp edges extending round almost the whole circumference (Pl. XXIII, 2).

Reading from the top left-hand corner of the photograph, the measurements (being taken from circumference to circumference along the vertical and horizontal axes) are: No. 1, 6 inches \times $3\frac{1}{2}$ inches; No. 2, $5\frac{1}{4}$ inches \times $4\frac{1}{2}$ inches; No. 3, $5\frac{1}{2}$ inches \times $4\frac{3}{8}$ inches; No. 4, $5\frac{3}{8}$ inches \times $4\frac{1}{4}$ inches. All the knives, with the exception of No. 3, which is $\frac{5}{16}$ inch, do not exceed more than $\frac{1}{4}$ inch in thickness.

Shortly after finding the knives, I was handed an unusually fine polished stone adze picked up in 1932 on the same turfless patch where the knives were found. It measures $12\frac{1}{4}$ inches \times $3\frac{1}{2}$ inches \times $\frac{1}{8}$ inch, highly polished over the whole surface, with sharp semicircular edge, and of a well-developed edge-like form (Pl. XXIII, 3).

The material used in both knives and adze is a porphyry, spherulitic felsite, and can be procured only from the Uyea Bjorgs, Roeness Hill. The action of the peaty soil has bleached the felsite from its original bluish green to a light grey colour.

It may be of interest to recall that polished stone knives and axes have been unearthed together on a previous occasion, namely at Modesty, West Burra-firth. This discovery is detailed in the *Proceedings*, vol. xxix. pp. 48-54 and vol. xl. p. 157.

My thanks are due to one of the Fellows, Mr L. G. Scott, Lerwick, for identifying the material, and supplying the information regarding the only area in Shetland from which this material can be procured.

PETER MOAR,
Corresponding Member.

3. JOTTINGS ON EARLY POTTERY.

As new information is published in archaeological journals, things long stored in museums can be seen in a new light. This has quite often been incidental to the rearrangement now going on in our collections. Some cases are placed on record here without discussion.

Pigmies Isle, Butt of Lewis.—In *Proc. Soc. Ant. Scot.*, vol. xxxix, 1904-5, p. 248ff. there is a description of certain structures and the legends attached to them. From under the floor of the smaller rectangular building there were dug up sherds and also bones of domestic animals which feature in the earlier stories about pigmies. The one sherd then illustrated, half size, has hitherto not been recognised as part of a Neolithic bowl. Three other decorated sherds are thinner and have the burnished surface better preserved, but are likewise "channelled" in Neolithic fashion. A sherd of the same type subsequently presented by J. Graham Callander, in 1915, bears a herring-bone pattern. The piece of slightly flattened base mentioned in the original account is of quite a different and more recent fabric.

Urquhart, Morayshire.—The Rev. James Morrison presented various fragments from Urquhart in 1871. Some of them may possibly be identified with those from pits at Meft farm which he described in *Proc. Soc. Ant. Scot.*, vol. ix, 1870-72, p. 255: "The pieces of pottery, some of them ornamented, are in general of better quality than the urn found in the cist on the same farm." At any rate there are three decorated sherds of quite good thin Neolithic A pottery, and five or six undecorated (fig. 1, 2-4). All contain quartz and some mica as temper. The colour varies from yellow to black through reddish and grey. In two cases the decoration is simply very shallow channelling which might have been executed with the back of the finger-nail (Pl. XXIV, 1, and fig. 1, 1), but on the third, narrow channels form metopic Unstan pattern (Pl. XXIV, 2).

Skitten, Caithness.—Among the Barry Collection there is a sherd from an unknown site at Skitten. It is a fragment of a rim, probably $7\frac{1}{2}$ inches in diameter, of hard grey to black pottery. A groove runs round the outside below the rim, and just below it starts a close series of slightly oblique lines; this suggests a bowl of Unstan type.

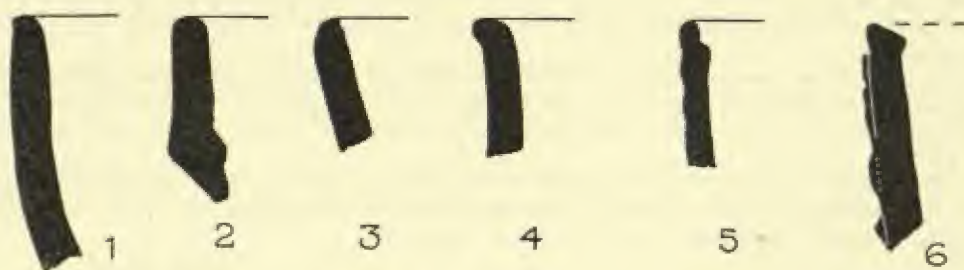


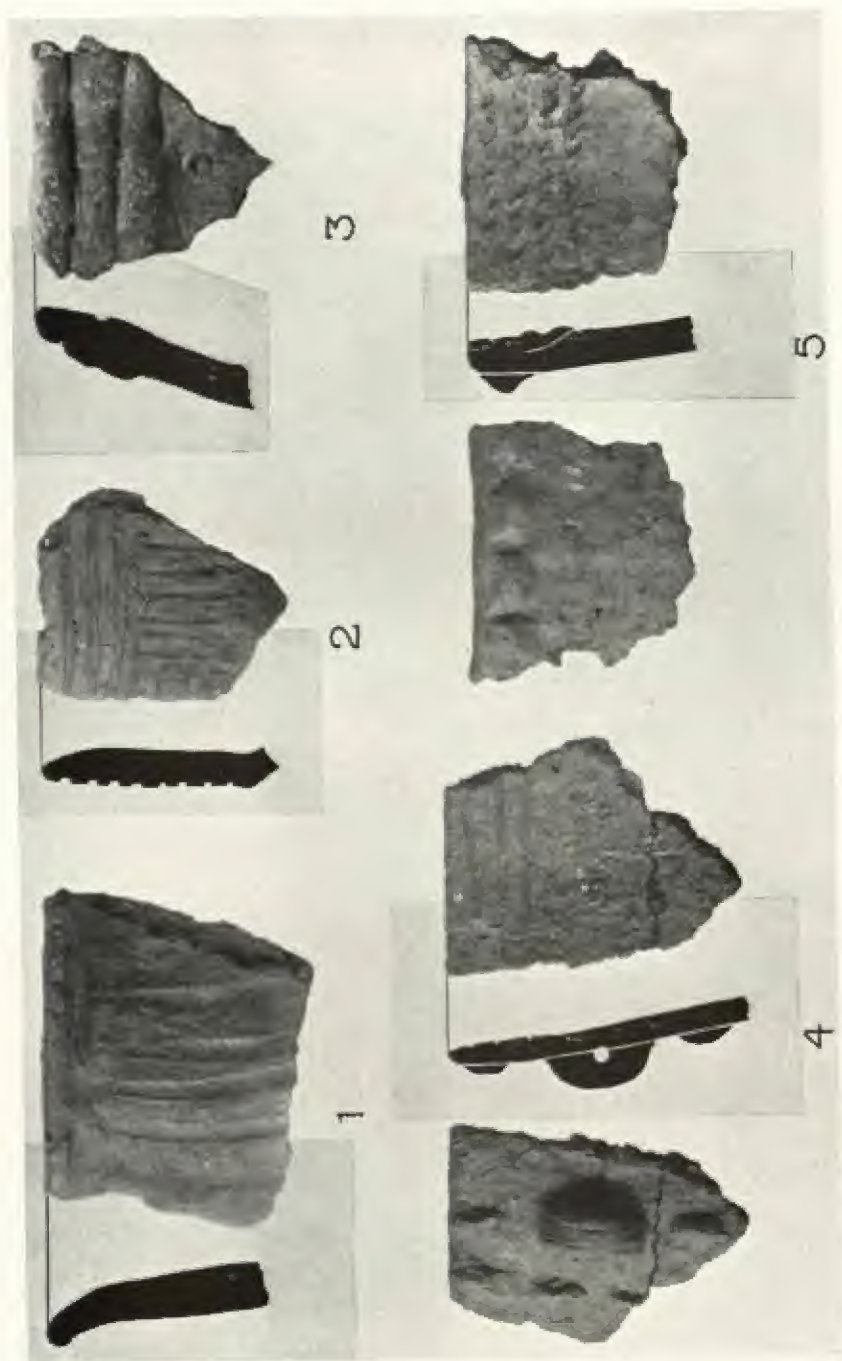
Fig. 1. 1-4, Urquhart—Neolithic A; 5, Hedderwick; 6, Evie—Grooved Ware. (c. $\frac{1}{2}$.)

Kenny's Cairn, Caithness.—Of the pieces published by Callander in his standard paper in *Proc. Soc. Ant. Scot.*, vol. lxxiii, 1928-29, his numbers 3, 5-7, 10 now appear to be Iron Age rather than Neolithic. Though they represent four somewhat differing fabrics, none are quite like the undoubted Neolithic sherds. The flat base (10) has a typically Iron Age texture. One of 3 and also 5 each show a structural joint not smoothed off on the inside (seen in section in his fig. 14.5); this is probably an Iron Age feature.¹ Finally, the angle that the walls made with the lips in the case of 3, 6, and 7 is wider than shown in Callander's sections—the last two in fact sloped markedly outwards. It will be remembered that C. S. T. Calder found Iron Age sherds in a chambered cairn in Eday.²

Dingieshoeve, near Deerness, Orkney.—Among the sherds from the "Broch of Deerness" (1892 Catalogue) presented in 1865 there are two fragments of a typical Grooved Ware pot, similar to sherds from Rinyo illustrated in *Proc. Soc. Ant. Scot.*, vol. lxxiii, Pl. XXII, 3 and 8. There is also a thick undecorated sherd from a large vessel resembling Rinyo's coarser fabric. The Royal Commission on Ancient and Historical Monuments record that pottery of this nature was

¹ *Proc. Soc. Ant. Scot.*, vol. lxxiii, p. 238.

² *Ibid.*, vol. lxxi, pp. 128, 143 ff.



1-2, Urquhart, Morayshire; 3-5, Glenluce Sands, Wigtonshire. (Under 1.)

R. B. K. STEVENSON.

[To face p. 142.



found some years ago in a kitchen-midden at Dingieshowe, which may be presumed to be the same site.¹

Evie, Orkney.—As also noted by the Commission,² a number of sherds of Grooved Ware were found on Evie Sands not far from the Broch of Gurness in 1930. These are now in the Museum, and may well all belong to one vessel (fig. 1, 6). Below the flat rim there are two horizontal grooves, and then after an interval the surface was peppered with small blobs as at Rinyo.³

Glenluce, Wigtownshire.—Three sherds not published by Callander may now tentatively be linked with Grooved Ware. The first is of very thin blackish ware with a reddish-buff exterior. The rim, which may have been some 6 inches in diameter, is undifferentiated; but on the inside three parallel lines are scored horizontally across a specially prepared zone, 9 inches broad (Pl. XXIV, 4). On the outside of the sherd elongated blobs have been applied in vertical rows starting just below the lip. At a level with the second and third rows there is a neatly formed vertical lug with small horizontal perforation, and two vertically scored lines cross the hump of the lug. The next sherd is thicker and muddy coloured (Pl. XXIV, 5), but seems to have belonged to a pot of the same size and shape with a similar decorated zone inside. This zone is strictly an applied band of clay; and bears three horizontal lines of cord impression with a fourth just below it: triple impressions of this kind are normal on B-beakers from Glenluce. Round the outside of the lip there is a close-set row of round applied blobs of clay.

The third sherd is even less certainly ascribed (Pl. XXIV, 3). It is coarser, black outside and reddish inside, and contains large grits. It has a roughly executed depressed line below the rim outside, and under that a broad, presumably applied, band with a hollow along the middle. On the inside a line seems to have been scored half an inch below the rim.

Hedderwick, East Lothian.—A fragment of Grooved Ware also comes from the Neolithic B and B-beaker site at Hedderwick.⁴ The wall is quite thin and hard. The outer surface is weathered but still light brown, the rest grey-black. Traces of two or three grooves can be seen faintly below the rim outside, while the inside of the rim is step-bevelled, as often at Rinyo (fig. 1, 5).

R. B. K. STEVENSON, *Keeper*.

4. "EARTH-HOUSE" AT NAVERSDALE, ORPHIR.

In spring 1943 Mr Bichan, tenant of Swanbister, Orphir, informed me that in the previous harvest he had lit upon a curious structure in a field on Naversdale, Orphir, about 300 yards north-east of the farmhouse. From the details given by him it is plain that here once again is one of those mysterious "earth-houses" similar to several found of recent years in Orkney.

¹ *Inventory of Orkney*, No. 625.

² *Ibid.*, Introduction, p. 58.

³ *Op. cit.*, Pl. XX, 5.

⁴ *Proc. Soc. Ant. Scot.*, vol. lxiil. p. 71, No. 28.

A roundish hollow has been excavated down into the subsoil. At intervals of approximately $2\frac{1}{2}$ feet rough pillar-piles of stone have been erected round the periphery, on which and on one centrally sited pillar rest large flat roofing flag-stones. The "room" thus formed is roughly 10 feet in diameter by 2 feet 9 inches to 3 feet in height. Earth again about a foot or more deep covers the roofing slabs up to the general surface-level of the field. Nothing seems to have been found in the "earth-house."

In most, if not all, of these buildings previously found, some at least of the supporting pillars have been single large blocks of stone. Here such large lumps have probably not been easily procurable, and built pillars have been used instead.

H. MARWICK.

5. OLD WINDMILL AT WHITHORN, WIGTOWNSHIRE.

To the list of nine old windmills in Scotland given by the late Mr Thomas McLaren in vol. lxxix. of the *Proceedings* (pp. 10-12) a tenth can now be added.

In the Whithorn Priory Museum is a water-colour view of Whithorn in 1825, which shows in the background a windmill, complete with sails, at the south end of the town. This mill has long been disused and is now ruinous, but the "Windmill Stump" is still something of a local landmark. It is situated at the top of the High Street, immediately east of the point where the Port William and Isle roads branch off. It consists of the shell of a two-storey circular building of brown sandstone, with some red brick, about 22 feet in height, with an iron railing about 3 feet high running round the top. On the western side is an outer staircase of stone leading from ground-level to the first floor, of which only a few odd timbers remain.

F. A. GREENHILL.

6. AN OLD COOLING-TROUGH IN FIFE.

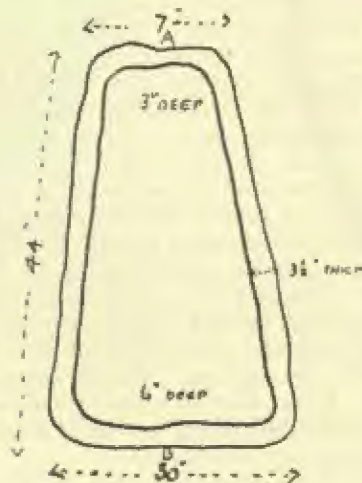
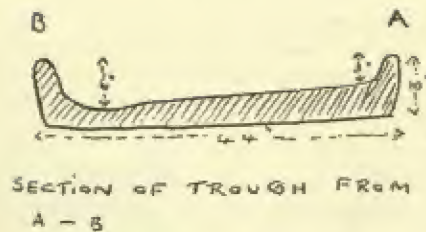
Four parishes meet near the Hazelton cross-roads in Fife, viz. Flisk, Balmerino, Kilmany, and Creich.

There is a curiously shaped trough by the well in the north-east corner of the cross, actually in Balmerino parish, which on inquiry was found to have been used as a cooling-trough in the adjacent smithy for a considerable period.

About forty years ago the trough was placed in its present position for use as a drinking-trough, as each cottage then kept a cow.

The stone (see Plan and Section) is similar to a larger one in Balmerino Abbey, probably used in the kitchen to catch dripping when a large carcase was being roasted, and may have come from Creich Castle (one mile) or from Mountquhanie Castle (one and a half miles).

N. M. JOHNSON.



PLAN of TROUGH

Old Cooling-Trough in Fife (Plan and Section).

7. AN ENCRUSTED-URN BURIAL AT SCOTLANDWELL, KINROSS-SHIRE.

The burial here described was found in the spring of 1946 during ploughing, as often happens; a horse's hoof sank into a hole in the ground, which was discovered by the farmer, Mr David Nicol, to be lined with earthenware and to have burnt bones in the bottom. The hoof had destroyed the base of an inverted urn, which remained otherwise intact. Fortunately there was no further disturbance till on Good Friday I visited Kilmagad Farm, close to the village of Scotlandwell, Kinross-shire, accompanied by Mr John Frew, a visitor from Edinburgh who had learned of the find and kindly informed Professor Childe.

The site was a low sloping knoll 40 yards below the road from Scotlandwell to Kinnesswood, and 250 yards north-west of the farm buildings of Kilmagad. The hillside slopes south-west and overlooks Loch Leven, 70 feet below and now about a mile away. If the low ground of Portmoak Moss were flooded the loch would only be a quarter of a mile away or less. Above the main road the ground slopes up more steeply to the top of the Bishop Hill (O.S. 6" Map (1913), Kinross-shire, Sheet No. XVIII S.E.).

A number of large stones had been removed from the knoll by Mr Nicol, but they may have had no direct connection with the burial. The knoll seemed, however, rather stony in comparison with the rest of the sandy soil of the field.

Though the original ground-level was not distinguished, the hole in the solid sandy subsoil which had been made to take the urn could be recognised. The filling was less compact than the natural, and of a browner, less yellow, tinge. The hole was circular, $2\frac{1}{2}$ feet across or rather more, with nearly vertical sides slightly undercut before contracting to the fairly flat bottom, which was 2 feet 2 inches to 2 feet 4 inches across, and which lay at most 2 feet 11 inches below the present surface. On a layer of clean laid sand some 2 inches thick there was a paving (Pl. XXV, 3). Three of the main stones met close together, but the fourth had been laid with a rounded side instead of a corner toward the centre—thus leaving there a strange triangular cavity which became filled with ashes. A fifth slab supplemented one of the four at the side, while six smaller stones were also set between the edges of the main ones and the sides of the hole. Two small pieces further levelled up cracks between main slabs. The largest slab varied from $4\frac{1}{2}$ to $2\frac{1}{2}$ inches in thickness, and its longest side was 16 inches. Subsequent to the laying of the paving two rather chunky stones, the larger 9 inches long, had been placed on the uphill (north-east) side of the bottom, but not clear of the flatter stones. Was this a symbolic protection of the mouth of the urn against the dangers of the North? At any rate no very practical purpose is obvious.

The mouth of the urn rested on the paving, the wide shoulders of the vessel being 5 inches from the sides of the hole all round (Pl. XXV, 2). Little but the actual base was missing when examined; it must have been just less than a foot below the present surface. Apart from a rather small amount of ashes (some had been removed when first found) the great urn was empty. The earth seen in the photograph fell in only during my excavation.

The urn (Pl. XXV, 1) is of the encrusted type, reddish outside and dark inside. As already explained, the base is now wanting. As is usual in this type of pottery, the fabric is very crumbly, and the urn collapsed completely when being removed from the ground. The present height is $15\frac{1}{2}$ inches, the diameter at the shoulders about $16\frac{1}{2}$ to $17\frac{1}{2}$ inches, the urn not being exactly round. The inner side of the rim slopes inwards for $1\frac{1}{2}$ inches and is decorated with rows of reed-end impressions. There is a similar row on the lip and two on the neck, which is sharply hollowed above an upper cordon, from which the wall of the vessel slopes outwards slightly to a cordon on the widest part, which is $3\frac{1}{2}$ inches lower down. Between these two cordons is an applied zigzag outlined by a row of reed impressions on either side. This has not been calculated before being applied, and as a result the pattern becomes completely irregular where the two ends meet.

The Museum is indebted to Mr Nicol, not only for his assistance in excavating the burial, but also for presenting the urn to the National Collection.

R. B. K. STEVENSON, *Keeper*.

8. FLINT CORE AXE FOUND ON FAIR ISLE, SHETLAND.

The purpose of this note is to put on record the discovery of what seems to be a Mesolithic flint core axe on Fair Isle, Shetland. The discovery was made in June 1945 while the writer, accompanied by Sub-Lieutenant Appleby, R.N., then in charge of the naval station on the island, was searching for skua chicks.



1. Engraved Urn from Scotlandwell. ($\frac{1}{4}$.)



2. Scotlandwell: Urn *in situ*.



3. Scotlandwell: Paving on which the Urn rested.

R. B. K. STEVENSON.

[To face p. 140.

The flint was embedded with other pebbles in a patch of bare ground from which the peat had been eroded. The site was the summit of a knoll on the edge of the plateau where the Great Skua nests, and about 800 yards west-north-west of the naval huts at North Haven. I estimated the height above sea-level as about 300 feet. It is a matter of regret that I did not think of preserving any of the peaty soil in which the flint was embedded on the chance that it might have contained the pollen that would have helped to locate the object in terms of the North European climatic sequence. When this was pointed out to me by Professor Childe, an effort was made to get in touch with Sub-Lieutenant Appleby to procure some of the soil, but he was no longer on the island, and no other opportunity has arisen of revisiting the island.

The object is a flint core axe measuring 12 cm. by 4.5 cm. The ends of the flint are not notably sharp but it has been given sharp edges. The edges are



Fig. 1. Flint core axe from Fair Isle ($\frac{1}{2}$).

formed by the intersection of flake scars, produced on both sides by blows transverse to the main line of the axe. Ripple marks indicating the direction of the blow are visible on both faces.

The implement has been manufactured from a very ugly piece of flint with a natural hole spoiling one edge. There is a lot of cortex on one side which passes into a layer of greyish-white patination. The fresh flint surfaces are grey. When observed the only part of the object visible was the rough cortex, and when picked up the contrast between the weathered surface and the freshness of the under surface was very striking. This led to the speculation as to whether the rough cortex could be a secondary deposit formed after the manufacture of the implement. Consideration shows that this cannot be the case and that it is the original outer cortex of the flint. What seems to determine the matter is that a face has been struck obliquely through the cortex at a very small angle into the layer of patination.

It is not the type of piece of flint likely to be used by people who had plenty of flint available, and for that reason one feels that it is unlikely to have been of

either Danish or Irish manufacture but may have been manufactured on the island where it was found. Flints must be exceedingly rare on Fair Isle. I cannot find a previous record, and an extensive search carried on for the two remaining days of my visit was quite unproductive. At the same time it is not impossible that occasional flints carried from chalk outcrops under the North Sea may occasionally turn up on Fair Isle. Flints are sometimes found at Rousay in the Orkneys, and within the past few weeks (March 1946) there has come into my possession a piece of highly silicified chalk with flint inclusions which was picked up on Bressay, about fifty miles north of Fair Isle. Flint tools are not uncommon in the Orkneys.

The technique of manufacture of the implement is that appropriate to the core axes characteristic of the Forest Culture throughout Northern Europe. Clarke in *The Mesolithic Settlement of Northern Europe* figures very similar implements from Broxbourne, England, and Sandarna, Sweden. Comparable implements are also found among the Late Larnian flints of Northern Ireland, but none have hitherto been found in Scotland.

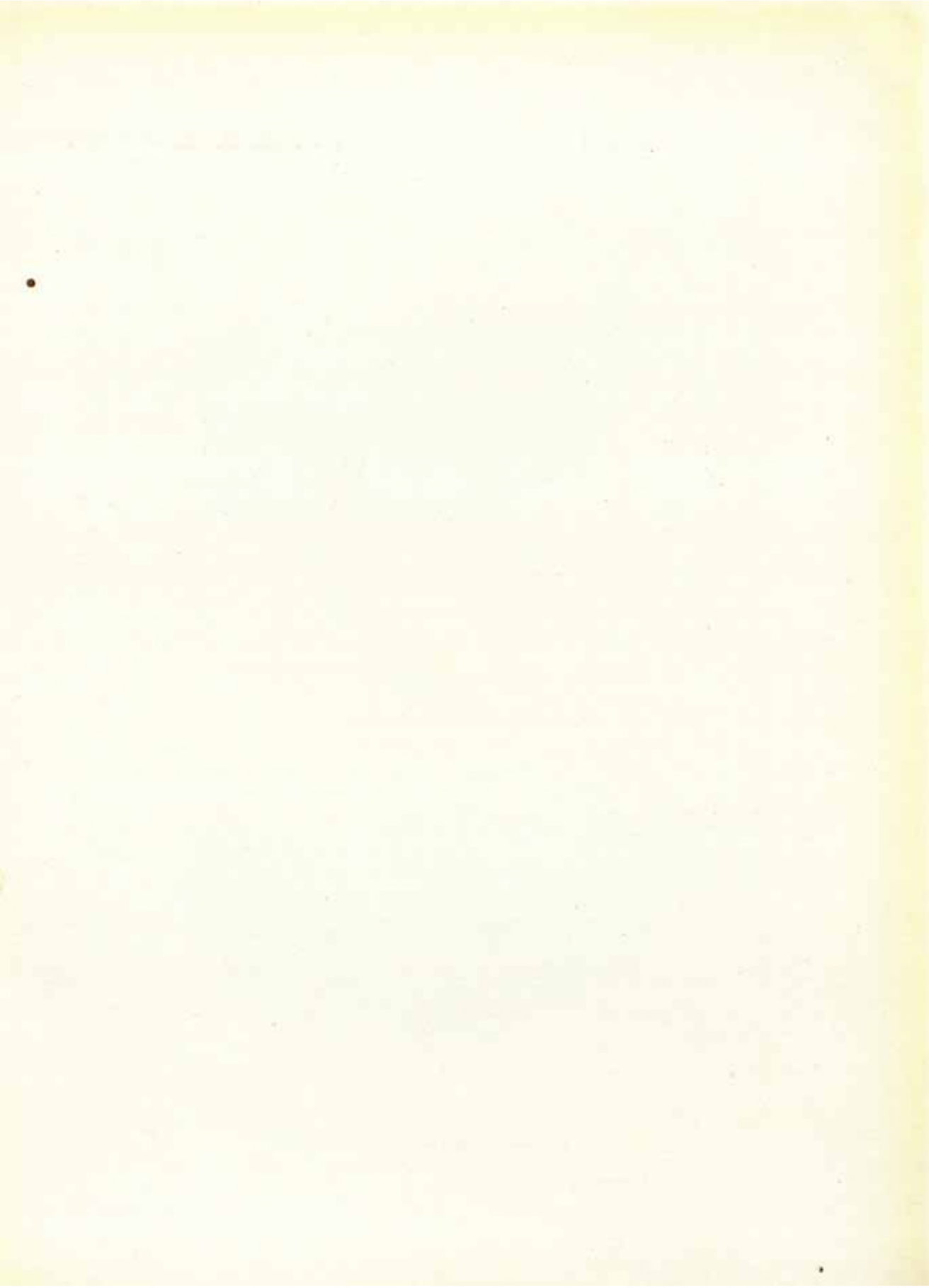
Such implements in Denmark occur in the Maglemose Culture, which began in the Boreal climatic phase and continued in use through the kitchen-midden culture of the Atlantic phase even into Sub-Boreal times. Lacking the pollen evidence it is impossible to do much more than hazard a guess as to the place of this Fair Isle axe. Movius in *The Irish Stone Age* contributes the most recent discussion of the position of Stone Age Cultures in Britain, and concludes (p. 193): "The Forest Culture of the North European Plain arrived in Scotland in Early Atlantic times, during the period of the Litorina transgression, and similar influences were diffused ultimately into the Late Larnian Culture of Ireland." It is perhaps then permissible to suggest that in the Atlantic Period, which witnessed the spread of the Forest Culture to the outlying parts of Scandinavia and to the mainland of Scotland, some elements of this culture arrived in the islands to the north of Scotland.

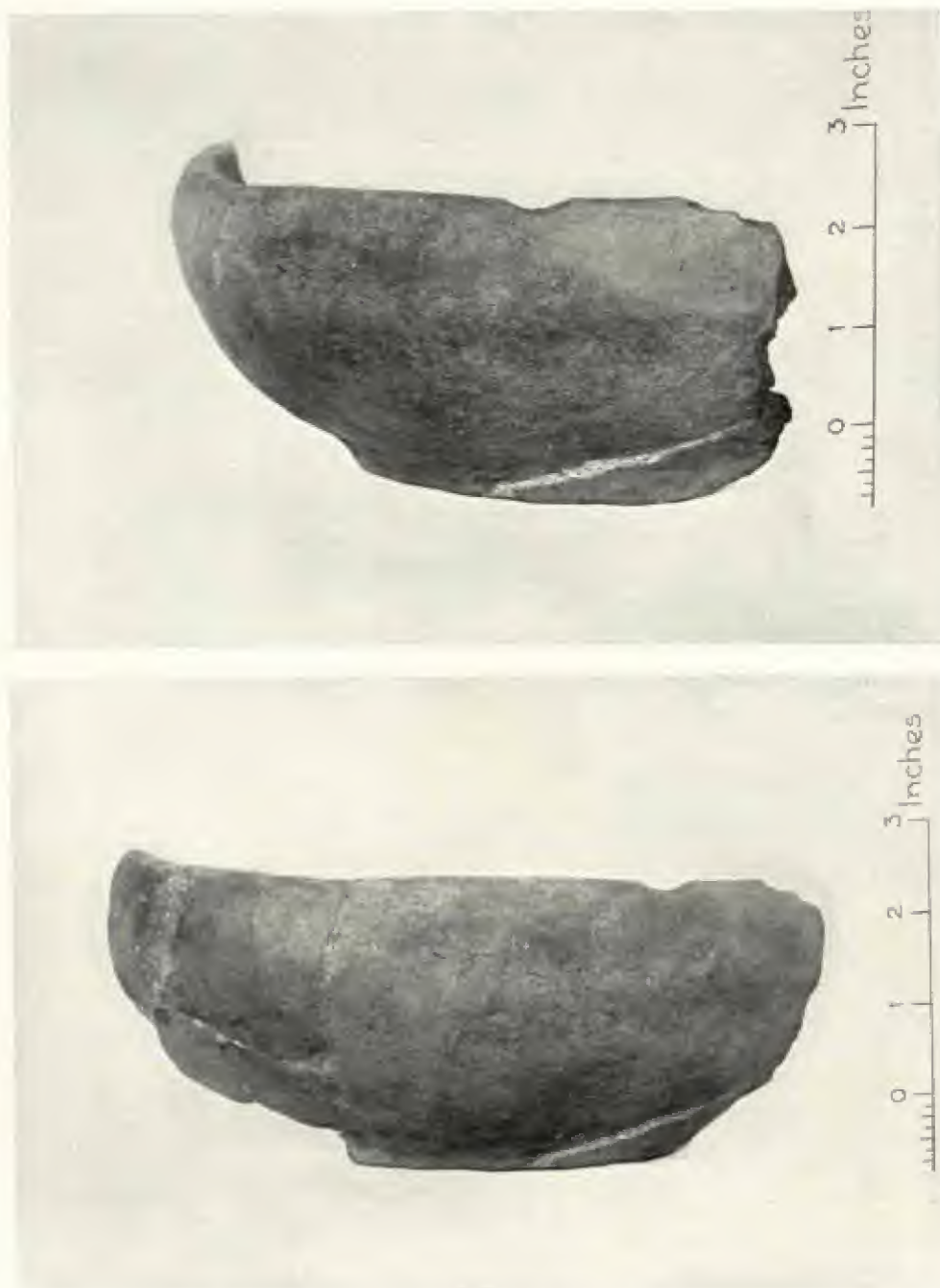
In conclusion I would like to express my thanks to Professor Childe for his helpful comments.

GEORGE A. CUMMING.

9. IRON AGE POTTERY FROM SUNDAYSWELLS HILL, TORPHINS, ABERDEENSHIRE.

Sundayswells Hill is the south-western offshoot of the Hill of Learney, which shelters the village of Torphins from the north. Learney Hill itself may be regarded as a prolongation westwards of the broad granitic mass of the Hill of Fare, which separates the Dee Valley from Midmar. After curving round the basin overlooked by Learney House, the hill divides itself into two spurs, known respectively as Chapelwell Hill and Sundayswells Hill, separated by a hollow in which the Gownie Burn descends towards the Dee. The western of these spurs, Sundayswells Hill, rises to a height of 820 feet, and falls steeply to the west into the valley of the Beltie Burn, which forms a natural avenue leading through from Deeside to Midmar.





Fragment of Bowl from Sundayswells Hill.

W. DOUGLAS SIMPSON.

[To face p. 149.

The hill is at present much overgrown with heather, bracken, and broom. I visited it on 11th February 1946 with our Fellow, Mr James Lumsden, F.S.A.Scot., Aberdeen. Although our time was limited, it was clear that the southern and south-western slopes bear many traces of early occupation, including numerous small cairns and lines of stone settings, suggesting stock-pens, much like those surveyed so carefully by the late Sir Alexander Ogston in the neighbourhood of Loch Kinnord.¹

In our *Proceedings* for the year 1905-6² there is a notice, based on information from the late Mr James Ritchie, of a beaker of Class B recovered from the central space in a cairn on Sundayswells Hill. Reference is also made to the discovery of a cist to the north-west of the cairn, in which were found "portions of a larger urn which are also at Learney." Mr Ritchie himself published in our *Proceedings* for the year 1918-19³ an account of the cairn, in which the somewhat damaged



Fig. 1. Section of bowl. See Pl. XXVI.

beaker was found by the late Colonel Francis Innes of Learney. The central hollow, 9 feet in diameter, surrounded by flat stones on average about 3 feet high, was compared to hollow-centred cairns within circles with a recumbent stone. Mr Ritchie makes no mention of the cist, irrelevant to his immediate subject. As it appeared that the second urn has never been published, I asked Sir Thomas Innes of Learney, F.S.A.Scot., Lord Lyon King of Arms, whether it still existed, and he kindly brought both urns into King's College, Aberdeen, for me to inspect, together with a photograph of the cist (Pl. XXVII, 1), which would seem to have been of the usual Early Bronze Age type.

The vessel is unfortunately imperfect, but it is totally unlike any British pottery of Neolithic or Bronze Age types. The fragments which have been pieced together (see photographs, Pl. XXVI, and section, fig. 1) make up a considerable part, amounting to about one-third of the circumference, of a wide shallow bowl or dish, the over-all diameter of which was about 9½ inches and the height 3¼ inches. The vessel has a flat and slightly splayed-out base or footstand, bulging sides, and an inverted rim, the actual lip being rounded so as to form a flattish curve. The thickness of the sides, at the middle of the bulge, is about ½ inch; in the base so far as this is preserved, the thickness increases to ¾ of an inch. The material

¹ See his *Prehistoric Antiquities of Cromar* (Third Spalding Club).

² Vol. xl. pp. 312-313.

³ Vol. liii. pp. 74-75.

is a hard, smooth, light rusty brown or mud-coloured clay, with a black core. It is very well mixed and free from grit, but shows numerous small specks of mica. The clay has been thoroughly fired, and the surface is remarkably uniform in colour, both outside and inside.

It seems to me that the affinities of this remarkable vessel must lie with the wide shallow bowls found on Hallstatt sites in Central or Western Europe, marked by a flat base often splayed or footed, sides bulging out in a broad swinging curve, and often an in-turned lip.¹ In Britain, bowls for example from All Canning's Cross and Scarborough usually are bent out at the lip again or just have straight sloping sides; we might conjecture, however, that our Aberdeenshire bowl represents a degenerated or "ultimate Hallstatt" version of such bowls.²

From Central Europe the Hallstatt Culture spread westwards by the Rhine valley and the Netherlands and so across the narrow seas to Britain. It is noteworthy that the Sundayswells bowl is quite different from the barrel or bucket-shaped pots which have been recovered from Old Keig, Loanhead of Daviot, and Foulerton in Aberdeenshire, as well as other sites in the north of Scotland. The latter type of vessel is thought to have reached us from Ireland, where similar "ultimate Hallstatt" ware is found. Our Sundayswells vessel from its shape, finer texture despite thickness, and very even firing seems rather to point to direct overseas contact with the continent. In that case it would afford a curious parallel to the far older B-beaker also found on the same hill—since it is agreed that such beakers are an importation from the Rhineland and Northern Holland.

So little is known of Early Iron Age burials in Scotland that it cannot be asserted that the cist is not contemporary with the vessel found in it.

W. DOUGLAS SIMPSON.

¹ See Ebert, *Reallexicon der Vorgeschichte*: from the Lower Rhineland, vol. viii, plate 158, No. 9, and plate 161, *c*; also from Kreuzlingen, Switzerland, vol. vii, plate 80, Nos. 2, 3, 10; from Koberstadt, S.W. Germany, vol. viii, plate 86, Nos. 10, 19, 20; from Würtemberg, *Encycl. Brit.*, 14th ed., vol. ii, p. 255, No. 4; and from France (Jogassees), *Revue Archæologique*, ser. v., vol. xxvi, p. 136, fig. 22, Nos. 40, 82.

² For Scarborough see *Archæologia*, vol. lxxvii, p. 100, fig. 32; for a fine sharply in-turned bowl from West Harling see *Archæol. Journ.*, vol. xci, p. 26, and plate III, 1.



1. Cist on Sundayswells Hill, Torphing, Aberdeenshire.

W. DOUGLAS SIMPSON.



2. Palette from head of Glen Mulck (see Donations to Museum, No. 14).

DONATION TO MUSEUM.

[To face p. 150.

DONATIONS TO AND PURCHASES FOR THE MUSEUM,
1945-46.*Donations.*

(1) Core axe of grey flint, found near North Haven, Fair Isle, Shetland. (See Notes, p. 146.) Presented by GEORGE A. CUMMING, Geography Department, St Andrews University.

(2) Discoidal scraper of black flint, from Pas de Calais, France. Fragments of friable pottery of Skara Brae type, probably from a single vessel decorated outside with an applied cordon $\frac{3}{8}$ inch below the flattened rim, and animal teeth, found on the sands at Evie, Orkney, not far from the Broch of Gurness. (See Notes, p. 142.) Collection of rude stone implements from Quendale, Dunrossness, Shetland, about 2 miles from Jarlshof. Fragments of mediæval earthenware from Rhodes Links, North Berwick, Gullane Sands, and Haddington. Small fragments of hand-made pottery, mostly with sandy texture and grass temper, from Loch Gruinart, Islay. Fragments of hand-made pottery, flakes and cores and a long flat stone, from Site 2, Gruinart, Islay. Presented by JAMES S. RICHARDSON, F.S.A.Scot.

(3) Arrow-head of yellow flint. Scutiform body with short tang, edges and part of face retouched carefully. Found at Whitehaugh Forest, Donside, Aberdeenshire. Presented by H.M. FORESTRY COMMISSIONERS.

(4) Broken ball of stone, grooved longitudinally, with most of the surface sealed off, from Rinyo. Flint knife made from a long triangular blade, found during excavation at Taiverso Tuick Cairn. Four arrow-heads of flint, from Rousay. Presented by WALTER G. GRANT of Trumland, F.S.A.Scot.

(5) Flints from Mellerstain Estate, Berwickshire, and from Yetholm, Roxburghshire. Presented by ALEX. MILLS, Darlingfield, Mellerstain, Earlston.

(6) Bronze flat axe with rudimentary flanges and splayed blade, $5\frac{3}{4}$ inches long, ornamented on both faces with rows of hammered parallel dashes wide apart at the butt end and close together forward of a slight central ridge. Flat sandstone pebble having an hour-glass perforation in the centre. Object of earthenware, like a stopper, height $2\frac{1}{2}$ inches (broken). All found on the donor's farm. Presented by JOHN V. LINDSAY, Cornhill Farm House, Cornhill-on-Tweed.

(7) Remains of a beaker and of five cinerary urns; flint knife and flake; two annular beads of blue vitreous paste; two pieces of shale; shells and cremated bones. Found during the excavation, in 1925-27, of a low mound

at Longniddry Golf Course, East Lothian. Presented by the EARL OF WEMYSS, Gosford House, Aberlady.

(8) Food-vessel urn of bowl type, found in a cist on Finnart Hill, Ayrshire. (See *Proceedings*, vol. lxxviii. p. 136.) Presented by LORD INCHCAPE, Glenapp Castle, Ballantrae, Ayrshire.

(9) Relics from an Urnfield at Monkton, Ayrshire. (See *Proceedings*, vol. lxxviii. p. 131.) Presented by Colonel BELLINGHAM, Rosemount Estate, Monkton, near Prestwick, Ayrshire.

(10) Cinerary urn of encrusted type from Kilmagad. (See Notes, p. 145.) Presented by DAVID NICOL, Kilmagad, Scotlandwell, Portmoak, Kinross-shire.

(11) Penannular ring of bronze 1 inch in diameter, with thickened terminals, behind each of which 4 or 5 pairs of cuts form a herring-bone pattern (fig. 1). Presumably a brooch with pin wanting. On an old envelope, containing it, is: "Ring Found in Stone Coffin on north side of Entrance Hall Luffness in working the floor. June 1848." Presented by Major HOPE of Luffness, Aberlady, East Lothian.



Fig. 1. Penannular bronze ring, from Luffness.

(12) Six sherds of reddish Iron Age pottery with linear patterns, decorated in three cases on the inside. Found in 1943 at a Broch at Deerness, Orkney. Presented by Captain L. L. E. MORETON, through James S. Richardson, F.S.A.Scot.

(13) Handmade clay pot, possibly of Early Iron Age date, having no provenance—purchased in an Edinburgh antique shop—height 5 inches, mouth diameter $4\frac{1}{2}$ inches. Presented by WILLIAM KIRKNESS, F.S.A.Scot.

(14) Circular palette of whitish micaceous stone (Pl. XXVII, 2). $3\frac{3}{4}$ inches in diameter and $\frac{1}{4}$ inch thick, the edge carefully scalloped in 15 divisions;

one side is ground very smooth all over, particularly in the centre where there is a slight depression. Found at a height of about 3000 feet at the head of Glen Muick. Presented by Colonel MACKENZIE, Braichlie, Ballater.

(15) "Second Brass" of the Emperor Hadrian, found in the south-east corner of the Antonine Fort at Mumrills during building work at the house called Westpark, Sandy Loan. Presented by the finder, JOHN BAIRD, Lauriston, per Samuel Smith, Corresponding Member.

(16) Fragment of undecorated pottery, and a polished bone implement, $3\frac{3}{8}$ inches long, from a kitchen-midden at Galson, Lewis. Presented by Dr R. STEVENSON DOIG, M.O.H., Lewis.

(17) Relics from H.M. Office of Works excavations during 1939 at the Brough of Birsay, Orkney. Presented by D. S. WALLACE, W.S., F.S.A.Scot.

(18) Sawn block of whalebone with inscribed circle, from Freswick Links. Presented by SIMON BREMNER, Corresponding Member.

(19) Octagonal brooch of bronze, finely patinated, with curved sides; the faces bear alternating panels of incised saltires and dotted parallel lines. Circular brooch of bronze with copper pin, roughly made with small stamped leaf design repeated round the edge of the upper face. Found at Coalis, near Newton, North Uist, by the donor. Presented by JOHN MACASKILL, Newton, Lochmaddy, North Uist.

(20) Lion ewer of brass, found in a dug-out canoe in Kilbirnie Loch, Ayrshire, in 1868 or 1869, along with a three-legged pot. (See *Proceedings*, vol. ix. p. 385.) Presented by Miss ROSE B. MYRTLE, Greenbank, Audlem, Cheshire.

(21) Iron axe-head $5\frac{3}{4}$ inches long, with flaring blade, $3\frac{7}{8}$ inches wide. Found in a stream near Ledbaig on the way to Loch Assynt, Sutherlandshire. Presented by the finder, J. C. McLAREN, c/o Stevens, 15 Marchmont Crescent, Edinburgh.

(22) Silver Groat of James I. Presented by Mrs F. INGOLDSBY, 2 Elliot Park, Edinburgh 11, per James S. Richardson, F.S.A.Scot.

(23) Fragment of stained glass, probably seventeenth-century Flemish, showing two female heads. Found over sixty years ago in the garden of the Oak House, Ormiston, East Lothian. Presented by HAROLD S. GEIKIE, Edgware, Middlesex.

(24) Gold and enamel ring, containing under a crystal a gilt medallion bearing a bust of Prince Charles Edward in relief; on the four-scolled hoop is inscribed in reverse on white enamel C.P.R./DUM/SPIRAT/SPERO. (See p. 127.) Presented by the NATIONAL ART-COLLECTIONS FUND.

(25) Oval gold locket $\frac{7}{8}$ inch by $\frac{3}{4}$ inch with loop for suspension; under a crystal the initials JR 8 in filigree surmounted by an embossed and coloured crown, all surrounded by a looped filigree border. On the back is engraved "Gift L^d Huntly To J^{no} Grant 1802." Pocket mirror in brown shagreen-covered case, oval with flattened ends $3\frac{1}{8}$ inches by $2\frac{3}{8}$ inches, one hook

of the two catches missing. Believed to have belonged to Prince Charles Edward and to have been given by him to Cluny Macpherson. Gold toothpick, the centre part twisted like a screw. Also believed to have belonged to Prince Charles Edward and to have been given by him to Cluny Macpherson. Late eighteenth-century ivory box $3\frac{3}{8}$ inches by 1 inch, containing the foregoing. These objects have been handed down in the family of Grant to Miss Frances Mary Grant, who died in 1927. Bequeathed by Mrs H. R. Loos, 13 Hillcrest Road, London, S.E. 6.

(26) Touting horn 11 inches long. The horn has been pared down near the mouthpiece to form a hand grip, except for a double ring to hold a cord. The body of the horn is engraved with a map of N.E. America as it was in mid-eighteenth century, showing the rivers, lakes, disposition of the forts, and pictorial features; and incorporating the Royal Arms of Great Britain and a crest, a hand grasping two sprigs of olive, with the motto *INSPERATA FLORUT* (*sic*) (Cleghorn or Watson). A curved projection, with serrated edge, at the mouth is pierced by two holes for suspension. Bequeathed by A. F. IMLACH, of 13 Ravelston Park, Edinburgh.

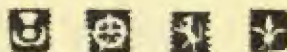


Fig. 2. Hall-marks on pewter plate.

(27) Twenty-seven pewter plates, of five sizes, large $16\frac{1}{2}$ inches, medium $14\frac{7}{8}$ inches, medium deep $14\frac{5}{8}$ inches, small $9\frac{5}{8}$ inches, and small deep 9 inches. The last size is unusual. Seventeen were made by John (Brow?)n, Edinburgh, and are "hall-marked" with a thistle, rose, lion rampant, and fleur-de-lis (fig. 2); three are medium, two medium deep, six small and six small deep, and except for one medium deep one they bear the initials IS EW scratched on the back. Five were made by William Hunter, Edinburgh, and bear his "touch" and "hall-mark" (Cotterell No. 2473); one medium and two small plates bear scratched initials IW MB, while the two large ones have IS alone. Five were made by (William) Ballantyne, Edinburgh; one is medium deep and four are small. These have the initials IS.

Elizabeth Waugh married James Smith probably at the Original

Secession Church, Shottsburn, shortly before 1780, but the Rev. John Dickson has been unable to trace any record. She died at Kirkroads Cottage, Bathgate, in 1847, her husband having predeceased her. The family tradition is that she sometimes lent this set of pewter for marriages and funerals, etc., and that the last occasion when they were so lent was in November 1811 for the funeral of the Rev. Mr Jardine.

Bequeathed by their great-grandson, Mr ROBERT RENNIE, at the instance of Mr W. Kirkness, F.S.A.Scot., and deposited by his niece, Miss DIVINA RENNIE, 103 Glasgow Road, Bathgate.

(28) Toddy-ladle of silver having inset in the bottom a shilling of George II. Octagonal tea-caddy of wood 5 inches high, the sides and top having decorative panels of rolled paper-work below glass. Bequeathed by ELIZABETH HAMILTON DALRYMPLE SHAND, widow of Alexander Marjoribanks.

(29) Seventy-nine Communion Tokens. Presented by J. R. LOCKIE, F.S.A.Scot.

(30) Silver medal with traces of gilding, $1\frac{1}{8}$ inch in diameter. *Obverse*: Man in armour with plumed helmet and flying cloak, and sword upraised, mounted on a prancing steed: around the words I · WILL AND · DARE. *Reverse*: Royal Crown above a thistle having a bunch of contorted leaves: around GRATA · SUPERVENIET · QUAE · NON · SPERABITUR · HORA. The significance of this medal is unknown. The suggestion made in the *British Numismatic Journal*, vol. vii. (1923-24), where an example is illustrated (p. 202), that it is of Jacobite origin, seems unlikely. The Lord Lyon King of Arms has kindly examined the Crown and considers that it indicates a date not earlier than about 1810. Presented by W. D. COOKSON, 66 Kells Lane North, Low Fell, Gateshead.

(31) Perthshire Trade Token (DEANSTON COTTON MILL) and a brass check for KIRKCALDY OR DYSART FERRY. Presented by Mrs McLAREN, 28 Gayfield Square, Edinburgh.

(32) Lead or pewter token "GREIG EDIN^B". White metal medal $2\frac{2}{3}\frac{9}{2}$ inches in diameter, made by Ottley, Birmingham, commemorating the "Exhibition of Industry of All Nations. London. 1851," the design including a representation of Paxton's Crystal Palace. White metal medal $1\frac{5}{16}$ inch in diameter, "in commemoration of the Edinburgh Forestry Exhibition, 1884," bearing the heads and names of the Prince of Wales and Princess Alexandra. Presented by ALEXANDER STUART, Lochrin House, Craiglockhart Terrace, Edinburgh.

(33) Circular badge of pewter, bearing the words HENRY BOULTER TOWN PORTER. Used in Edinburgh by the donor's great-grandfather. Presented by J. E. BROWN, Sunnydene, Bonnyrigg.

(34) Pair of steel-rimmed spectacles in green shagreen case, used by Sir James Gillespie Graham, Architect, Edinburgh. Three pairs of steel-

rimmed spectacles, one with black rings round the lenses. Pair of tortoise-shell spectacles (one lens missing), used by Mrs John Maule, mother of the architect. Circular snuff-box of polished rosewood in two lenticular halves, probably used by a member of the Maule family. Bequeathed by Miss C. H. MAULE HORNE, Joppa.

(35) Iron two-edged knife with wooden handle, with nails probably for a leather strap, found in the rafters of a cottage on the east shore of Loch Leven, Portmoak Parish, Kinross-shire. Presented by A. L. ARCHIBALD, 19 Craigerook Square, Edinburgh 4.

(36) Drying or toasting rack of iron. Presented by Mr and Mrs R. K. DALZIELL, Hall Rule, Bonchester Bridge, Hawick.

(37) Modern flail from Ayrshire. Sykes patent shot belt of leather. Bequeathed by ARCHIBALD FAIRBAIRN, F.S.A.Scot., Muirkirk, Ayrshire.

(38) Clay tobacco pipe. Presented by THOMAS MACMASTER, F.S.A.Scot.

(39) Object of clay fired hard and black, shaped like a quarrel-head. Length $1\frac{1}{2}$ inch, breadth of one of the four sides $\frac{3}{8}$ inch. Found among the roots of an old tree at Torsonce, Midlothian. Presented by DOUGLAS SERVICE of Torsonce, F.S.A.Scot.

(40) Cleaver of iron with iron shaft found at Maiden Bridge, Newbattle Abbey, Midlothian. Presented by Colonel A. C. T. WHITE, V.C., No. 1 Formation College.

(41) Horse-shoe shaped iron door-knocker, with ornamental dots forming a border and central pattern, and door-nail, said to be from the door of Old Gordon House, Edinburgh. Presented by A. J. YOUNG, L.R.C.P. & S. (Edin.), Christchurch, Hants.

(42) Oil-lamp of tinned iron $9\frac{3}{4}$ inches high, with wire loop for suspension, found in a cottage in Comrie. Presented by WM. STIELL, Comrie.

Purchases.

(1) Arrow-head of grey-brown flint, broad-pointed tang, tip blunted by retouch and rather thick. Flattened globular bead of bluish-pink material, much sand-worn. Ring of penannular brooch of bronze, flat below, moulded on upper surface: the zoomorphic terminals have flattened ends, behind which circular eyes project with hollowed centres, followed by a further transverse moulding: outer diameters of ring $\frac{9}{8}$ inch by $\frac{7}{8}$ inch, thickness $\frac{1}{8}$ inch. (This is from the same mould as the brooch illustrated in the Museum's Catalogue, 1892, p. 89.) All from Glenluce Sands.

(2) Eight Trade Tokens: 4/9d. CATRINE COTTON WORKS, Ayrshire; 2/6d. ROTHESAY MILLS; BALFRON VICT SOCIETY, Stirlingshire; 5/- GLASGOW BANK; $\frac{1}{4}$ d. LANARK COTTON MILLS; 1/6d. and ? 2/6d. ADELPHI COTTONWORK Perthshire; 5/3d. PAISLEY DOLLAR SOCIETY. From the COKAYNE COLLECTION.

DONATIONS TO AND PURCHASES FOR THE LIBRARY,
1945-46.

Donations.

- (1) *The Creative Centuries.* By Henry John Randall. Presented by Professor V. GORDON CHILDE, D.Litt., D.Sc., F.B.A., V.-P.S.A., F.S.A.Scot.
- (2) *Edinburgh University Calendar for 1945-46.*
- (3) *Cereals in Great Britain and Ireland in Prehistoric and Early Historic Times.* By Knud Jessen and Hans Helbaek. Presented by THE AUTHORS.
- (4) *Reigate, Its Story through the Ages.* By Wilfrid Hooper, LL.D., F.S.A. Presented by THE AUTHOR.
- (5) *Supplement to Catalogue of the National Gallery of Scotland.*
- (6) *More Thoughts and Comments of a Doctor.* By F. Parkes Weber, M.A., M.D. Presented by THE AUTHOR.
- (7) *Samson and the Lion.* A reprint from the *Gazette des Beaux-Arts.* By Wolfgang Born. Presented by THE AUTHOR.
- (8) *The Minnesota Archaeologist with article "Indian Trade Silver of Canada."* By Marius Barbeau.
Notes on Indian Trade Silver Ornaments in Michigan. By George I. Quimby.
Dates Indian Burials in Michigan. By George I. Quimby.
Presented by JAMES TAIT, F.S.A.Scot., 870 Emerson Avenue, Detroit.
- (9) *Chronique de Jean Le Bel, Volumes I and II.* By Jules Viard and Eugene Deprez.
Cathedrals. Published by the Great Western Railway Company.
Historical and Descriptive Notes of the Ecclesiastical Remains at Glendalough, Co. Wicklow.
Aranoes. Extract from Kungl. Vitterhets Akademie, Stockholm, 1927.
Proceedings of the Royal Irish Academy, Volume XXVII, Section C, No. 15.
Presented by W. MACKAY MACKENZIE, M.A., D.Litt., H.R.S.A., F.S.A.Scot.
- (10) *Bonner Jahrbücher, Volumes 145, 146, 147.* Presented by KENNETH A. STEER, M.A., Ph.D.
- (11) *Illustrated Catalogue, Anglo-Saxon Leicestershire and Rutland.* Presented by CITY OF LEICESTER MUSEUM AND ART GALLERY.
- (12) *Space, Time and Race, or The Age of Man in America.* By Dr R. E. G. Armattoe, F.S.A.Scot. Presented by THE AUTHOR.
- (13) *The Viking Graves in Great Britain and Ireland.* By Professor Dr.philos. Haakon Shetelig, Hon. F.S.A.Scot. Presented by THE AUTHOR.

(14) Orkney and Shetland, 12th Report of Royal Commission on Ancient Monuments, Scotland. Three volumes.

(15) The Word Ogham. By L. J. D. Richardson, M.A. Presented by THE AUTHOR.

(16) Private Catalogue of Armour, Weapons, etc., in the collection of Sir Noel Paton. Presented by Mrs C. E. WHITELAW.

(17) Stenalder Bopladsen I Aamosen. By Therkel Mathiasen (Copenhagen, 1943). From ROYAL SOCIETY OF NORTHERN ANTIQUARIES.

(18) The Scientific Research Fund of 1919. "Viking Antiquities in Great Britain and Ireland," five volumes. Edited by Professor Dr.philos. Haakon Shetelig (Oslo, 1940).

(19) Regional Libraries Scheme for Wales and Monmouthshire, 13th and 14th Annual Reports, 1944, 1945.

(20) Guia Turistica de Cartagena (1946). Sent by DIRECTOR, Periodicals Department, The British Council.

Purchases.

Illustrations of Incised Monumental Slabs on the Continent of Europe. By R. H. Edleston.

Préhistoire. Tomes vii., viii. and ix.

Analecta Bollandiana, Indices. Vols. xli.-lx. (1923-42).

Acta Archæologica, Kobenhaven. Vol. ix. Fasc. 3; Vols. x.-xv. Fasc. 1-3.

Welsh Folk Crafts and Industries. By Iorwerth C. Peate.

A Find of the Early Iron Age from Llyn Cerrig Bach, Anglesey. By Sir Cyril Fox, Ph.D., P.S.A., F.B.A.

The History and Romance of the Paisley Shawl. By A. M. Stewart.

Corpus Inscriptionum Insularum Celticarum. Vol. i. By Professor R. A. S. Macalister, M.A., Litt.D., M.R.I.A.

ANNIVERSARY MEETING, 30th November 1946.

WILLIAM ANGUS, LL.D., Vice-President, in the Chair.

Sir Francis Grant and the Rev. John M. Connor were appointed Scrutineers of the Ballot for Office-Bearers.

The Ballot having been concluded, the Scrutineers found and declared the List of the Council for the ensuing year to be as follows:—

President.

The Right Hon. THE EARL OF HADDINGTON, M.C., T.D.

Vice-Presidents.

J. M. DAVIDSON, O.B.E., F.C.I.S., F.S.A.
Professor J. DUNCAN MACKIE, C.B.E., M.C., M.A.
ALEXANDER O. CURLE, C.V.O., LL.D., F.S.A.

Councillors.

Lady WATSON, M.B., Ch.B.	} <i>Representing the Board of Trustees.</i>
Sir JOHN STIRLING MAXWELL, Bart., K.T., D.L.	
Sir DAVID RUSSELL, LL.D.	} <i>Representing the Board of Trustees.</i>
E. W. M. BALFOUR-MELVILLE, M.A., D.Litt.	
Brigadier-General E. CRAIG-BROWN, D.S.O.	
WILLIAM HENDERSON, M.A.	
	Miss ANNE S. ROBERTSON, M.A.
	WILLIAM ANGUS, LL.D.
	Major IAN G. LINDSAY.
	JOHN RICHARDSON, W.S.
	WILLIAM F. ARBUCKLE, M.A.

Secretaries.

DOUGLAS P. MACLAGAN, W.S. | ANGUS GRAHAM, M.A., F.S.A.

For Foreign Correspondence.

Professor W. M. CALDER, M.A., LL.D., F.B.A.	W. DOUGLAS SIMPSON, M.A., D.Litt., F.S.A.
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Treasurer.

J. BOLAM JOHNSON, C.A.

Curators of the Museum.

JAMES S. RICHARDSON,	IAN A. RICHMOND, M.A., LL.D., V.-P.S.A.
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Curator of Coins.

ROBERT KERR, M.A.

Librarian.

ROBERT B. K. STEVENSON, M.A.

A Ballot having been taken, the following were elected Fellows: Cyril Aldred, B.A.; George Donald Banks; Miss Elsie J. Begg; Walter R. Bett, M.R.C.S., L.R.C.P., F.R.S.L., F.R.S.A.; Captain Ian C. Cameron; Rev. James Chisholm; Rev. Albert Cannon; The Right Hon. The Earl of Crawford and Balcarres; John Telfer Dunbar; Walter Duncan, M.A., J.P.; Mrs Annie I. Dunlop, O.B.E., M.A., Ph.D., D.Litt; Alan Gardner; Donald Gillies; Rev. Robert B. Hannen, M.A.; John E. Hooper; Rev. George P. Innes, M.A., LL.B.; J. T. A. Johnson; J. W. H. Johnson, C.A.; Rev. John W. Kilpatrick, M.A., B.D., Ph.D.; Arthur Knight, B.Sc., A.R.T.C.; Philip Lindsay; The Hon. Lord Mackay; Archibald MacWhirter; Robert Norman Marshall; J. B. Mason; John Fraser Matthew, F.R.I.B.A., F.R.I.A.S.; George Maxwell; Miss Frances Mercer, A.R.I.B.A.; Rev. F. H. Amphlett Micklewright, M.A., F.R.Hist.S.; Captain Hugo B. Millar; G. T. Mowat, F.R.C.S.; Miss Constance M. Mullins; Eric W. H. Nairn, S.S.C.; The Baron Ouchterlony of Kellie; Mrs C. M. Piggott, F.S.A.; David Charles Scott-Moncrieff; Rev. Constantine Sinclair; Ralph F. Smith, F.R.Econ.S.; Theodore Radford F. Thomson, M.A., M.D.; John Tweedie, L.D.S.; James K. Wands.

The Assistant-Secretary read the following List of Members deceased since the last Anniversary Meeting: *Fellows*—J. Craig Annan; Rev. T. Ratcliffe Barnett, Ph.D.; Sheriff George Brown; Emeritus Professor Thomas H. Bryce, M.A., M.D., LL.D., F.R.S.; Rev. Will Burnett, B.D.; H. R. Campbell; Colin Hugh Dakers, M.C.; William Reid Gardner, M.B.E., J.P.; Sir Alexander Gibb, G.B.E., C.B., LL.D., F.R.S.; Will Grant; William Greenhill, C.A.; Henry F. Kerr, A.R.I.B.A.; W. T. Ketchen, W.S.; Robert James Larg, J.P.; Sheriff John Dean Leslie; William Elder Levie; John W. M. Loney; Rev. John MacLean; Robert A. McLellan, M.I.Loco.E.; Sir John Lorne MacLeod, G.B.E., LL.D.; Rev. Malcolm Macleod, M.A.; Thomas Purdie; Rev. Gordon Quig, M.A., B.D.; Joseph Riley Ratcliffe, M.B., C.M., F.R.S.E.; W. G. Aitchison Robertson, M.D., D.Sc., F.R.C.P.E.; J. M. Rusk, O.B.E., J.P., S.S.C.; John Russell; Robert Taylor Skinner, M.A., F.R.S.E.; Alexander Smith, M.A., F.R.S.A.; Rev. William Stephen, B.D., D.D.; James Cowan Thyne; Malcolm Warrack; James Watt, LL.D., W.S., F.F.A.; Percy William Weston, F.R.G.S., F.C.S., F.Z.S.

The Assistant-Secretary read the following Report by the Council on the affairs of the Society:—

ANNUAL REPORT.

The Council herewith submits to the Fellows of the Society its Report for the year ending 30th November 1946.

<i>Fellowship.</i> —The total number of Fellows on the Roll at	
30th November 1945 was	832
At 30th November 1946 the number was	822
being a decrease of	10

The number of new Fellows added to the roll during the year was 27, while 34 died, 5 resigned, and 6 allowed their membership to lapse.

Proceedings.—It was hoped that Volume LXXIX would by this time have been ready for issue, but delays are unavoidable in view of present conditions in the printing trade. The volume is now, however, in the binders' hands, and should be issued very soon. It contains seven papers, including the Address by The Right Hon. Lord Normand at the reopening of the Museum in March 1945. There are two papers on prehistoric subjects, and the rest deal with later periods.

Professor Childe, who has acted as honorary Editor since 1938 and who kindly undertook responsibility for the forthcoming volume, has now relinquished this task upon his appointment to the Chair of Prehistoric European Archaeology in the University of London; and the Council anew expresses its cordial thanks to him for this and many other services to the Society. The editorship is now in the hands of the Assistant-Secretary.

The Museum.

Staff.—Professor V. Gordon Childe relinquished his position as honorary Acting Director in the beginning of February 1946, Mr R. B. K. Stevenson having at that time been specially released from military service. At the beginning of October 1946 Mr Stevenson was promoted to succeed the late Mr A. J. H. Edwards, retaining, however, the title of "Keeper," which the Secretary of State considered to be more appropriate for the post than that of "Director," in use since 1913.

Other staffing changes have to be recorded. For a period at the end of 1945 Professor Childe had the part-time assistance of Mr Ian Finlay, of the Royal Scottish Museum. Mr J. E. Brown commenced work in November 1945, filling the temporary post of assistant Technical Assistant.

Exhibition.—The prehistoric, Roman and Viking collections were reopened to the public on 10th June 1946. The special arrangement of the ground-floor gallery has been retained pending redecoration.

Accessions.—Attention need be drawn only to a few of the year's acquisitions. The most important is a gold and enamel Jacobite finger-ring of unusually fine workmanship, formerly owned by the Setons of Touch, which was presented by the National Art Collections

Fund to which the Museum has already been much indebted in the past. Twenty-seven pewter plates were bequeathed by Mr Robert Rennie, Bathgate; they belonged to his great-grandfather and grandmother, and include fifteen bearing an unrecorded Edinburgh touch. Another bequest, by Mr A. F. Imlach, is an eighteenth-century touting horn engraved with a map of North-East America and a crest, probably Cleghorn or Watson. Mr J. R. Lockie, F.S.A.Scot., has again made an important addition of seventy-nine items to the Communion Token collection.

A mediæval lion ewer of brass found in Kilbirnie Loch, Ayrshire, and described in *Proc. Soc. Ant. Scot.*, vol. ix. p. 384, was presented by Miss R. B. Myrtle. A Celtic brooch and other finds from the Brough of Birsay, Orkney, were given by Mr D. S. Wallace, F.S.A.Scot.

Among the prehistoric objects are a number of urns, two faience beads and other objects, found at Longniddry, East Lothian, and presented by the Earl of Wemyss; a cinerary urn and fragments of others from Monkton, Prestwick, Ayrshire, presented by Colonel Bellingham; a food-vessel urn from Glenapp, Ayrshire, presented by Lord Inchcape; and an encrusted cinerary urn from Kilmagad, Kinross-shire, presented by Mr D. Nicol. More unusual gifts are part of a penannular brooch of Romano-Celtic type found in 1848 in a grave at Luffness, East Lothian, presented by Major Hope of Luffness; and a core axe of flint from Fair Isle, given by Mr G. A. Cumming.

The few purchases included eight rare early nineteenth-century trade tokens.

The total number of acquisitions during the year was 257, of which 246 were by donation or bequest and 11 by purchase. They include a number of objects which for a considerable time have been deposited in the Museum. For purposes of record and ease of finding, objects lying unrecorded in the Museum are being gradually registered, but none of these are included in the above total.

The Library.—The Library has been open throughout the year. It has acquired 33 volumes by donation and 16 by purchase. In addition, and worthy of particular mention, is the gift by his daughter, Mrs Pitman, of a large part of the library of the late Dr James Curle, including many books relating to Roman culture and antiquities, and several sets of lantern slides dealing with that period.

Exchange of publications has been largely resumed with foreign societies.

The thanks of the Council is due to Dr W. D. Simpson for his services as honorary Librarian, from which post (as has been indicated) he now retires.

Excavations.—During the course of the year Mr Walter Grant of Trumland and Professor Childe were engaged in certain operations at Rinyo, in Orkney, the results of which are to be described and published. In the late summer Dr A. O. Curle undertook excavations in Caithness, meeting the costs of travel and subsistence himself, while the cost of labour was met from the funds of the Society. He explored extensively a "Wag" at Forse, in the parish of Latheron, and is preparing an account of his discoveries. Dr Ian A. Richmond obtained a grant for excavation at Inveresk, and has made discoveries concerning the Roman fort, the value of which will be more clearly demonstrated when digging can be resumed.

Rhind Lectureship.—Two series of Rhind Lectures have been delivered during the current year. The first series was given in June by Professor Haakon Shetelig, his subject being "Scandinavian Art of the Post-Christian Pagan Period." The other series was delivered in October by Mr Bryan H. St. J. O'Neil on "Castles and Cannon: A Study of Early Artillery Fortifications in England." It is expected that the Rhind Lecture for 1947 will be delivered by Mr James S. Richardson, H.M. Inspector of Ancient Monuments in Scotland, who has selected as his subject "Scottish Mediæval Structures and Arts."

Gunning Fellowship.—The Fellowship for 1946 was awarded to Mr Robert B. K. Stevenson.

Chalmers-Jervise Prize.—The area selected for advertisement of this Prize for the current year was the County of Selkirk, but no essays have so far been received. In consequence, however, of appeal through the Local Education Officer, the name of a candidate has been received, and a further extension of time has been allowed for preparation of the essay.

(Signed) WM. ANGUS,
Vice-President.

Dr E. W. M. Balfour-Melville moved the adoption of the Report and the motion was seconded by Brigadier-General E. Craig-Brown.

Mr James S. Richardson drew attention to the services which Professor V. Gordon Childe had rendered to the Society as honorary Editor of the *Proceedings*, and to the Museum, and moved that a letter of thanks be sent to him from the Society. This was seconded by Sir Francis Grant, and cordially agreed to.

At this point the Chair was taken by Mr J. M. Davidson, O.B.E., F.C.I.S., F.S.A., Senior Vice-President.

It was indicated that the customary Statement of Accounts by the Treasurer was not forthcoming, but would be circulated to the members at a later date.

MEETINGS OF THE SOCIETY.

Monday, 14th January 1946, WILLIAM ANGUS, LL.D.,
Vice-President, in the Chair.

A Ballot having been taken, the following were elected Fellows: Mrs Margaret Inglis Barron; Thomas D. Davidson; Miss Elizabeth Barron Henderson; John D. Mackay, M.A.; Bryan H. St J. O'Neil, M.A., F.S.A.; Thomas J. Sampson, J.P., M.I.Q.; Rev. Professor C. J. Mullo Weir, B.D., D.Phil.(Oxon.).

The following Communications were read:—

- I. A Bronze Worker's Anvil and other Tools recently acquired by the Inverness Museum, with a Note on another Scottish Anvil, by Professor V. Gordon Childe, D.Litt., D.Sc., F.B.A., V.-P.S.A.
- II. Symbol Stone at Inchyra, by T. McLaren, F.S.A.Scot.
- III. The Inauguration of Alexander III, by Miss M. D. Legge.

Monday, 11th February 1946, WILLIAM ANGUS, LL.D.,
Vice-President, in the Chair.

A Ballot having been taken, the following were elected Fellows: James Birrell; Lieut.-Colonel A. H. Buchanan-Dunlop of Drumhead, O.B.E., T.D.; Herbert Charles Glennie, M.A.; E. W. Scobie Stringer, D.Ph.S., M.R.S.T., M.R.A.I.; Rev. D. Gunn Sutherland; Miss Jessie Braidwood Webster, M.A.

The following Communications were read:—

- I. The Abbot's Cross, Forfarshire, by Wm. Fenton, F.S.A.Scot.
- II. Notes on Duns and some other Antiquities in Colonsay and Islay, by Mrs C. M. Piggott, F.S.A.
- III. Hoards of Stone Knives, by Peter Moar, Corresponding Member.

Monday, 11th March 1946, W. MACKAY MACKENZIE, M.A., D.Litt.,
in the Chair.

A Ballot having been taken, the following were elected Fellows: Robert Coltart Craig; Robert Dickson, J.P.; Mrs D. V. Hereward; Andrew Warnock McCall; Robert Moncrieff; Rev. T. W. Whitehead, B.D., Ph.D.

The following Communications were read:—

- I. A New Roman Mountain-road in Roxburghshire, by Ian A. Richmond, M.A., V.-P.S.A., F.S.A.Scot.
- II. Notes on some Northumbrian "Peles," by Angus Graham, M.A., F.S.A., F.S.A.Scot.

INDEX

	PAGE		PAGE
Abbot's Cross, Lintrathen,	34-8	Bower's views on coronation ceremony, 77, 79, 81	
Aberdeen, Church lands near,	35	Branshaw Pele,	41
Aberdeenshire, Pottery from,	148-50	Bremner, Simon, donation by,	153
Accession to Throne, Age and Time of,	75, 76	Brochs, probably permanent residences of landed proprietors,	24
Accessions to Museum and Library,	6	— with attendant wag or pound for pro- tection of sheep and cattle,	22
Adze, Stone, polished, from near Lerwick,	140	Bronze Brooch from Cuthil Links,	32
Akeld Bastel,	39 n.	Bronze Worker's Anvil and other Tools,	8-11
Alexander III, The Inauguration of,	73-82	Brooch of Bronze found on Cuthil Links,	32
Allt a' Mhuilinn, Cairn at,	33	Broomholm, Coin-hoards at,	105 and n.
Altars, in Cross Kirk, Peebles,	55	Broma, Cairn near,	33
Ancrum Moor, Pottery from,	143	Brown, Sheriff George, death of,	160
Anderson, Rev. Robert S. G., death of,	2	— J. E., donation by,	155
Annan, J. Craig, death of,	160	Bryce, Emeritus Professor Thomas H., death of,	160
Anniversary Meeting, November 1946,	159	Burnett, Rev. Will, death of,	160
Annual Report, 1945-46,	100	Bust of Prince Charles Edward in medallion,	127
Anvil, Mould for,	8, 10		
Archibald, A. L., donation by,	156		
Armour, Scottish, in the early fifteenth century,	44-6		
— transition from full mail to complete plate,	46		
Arrow-heads, from Golspie Links,	32	Cadboll, Traces of Chapel structure at,	27
Ascoile, Stone Circle at,	33	— Sculptured Stone,	27
Attendances, Museum,	4	Cadbollmount, Chapel at,	27
Axe, flint core, at Fair Isle,	146-8	— Tumulus at,	25
		Cairn, Allt a' Mhuilinn,	33
		— Greenan,	33
Baird, John, donation by,	153	Caithness, Pottery from,	142
Balintore, Cemetery at,	26	— Suitability of "wag" structure in,	25
Ballone, Remains of Chapel at,	27	— Wag at Forse,	11-25
— Sculptured Grave Slab near,	28	Cameron, Sir D. Y., death of,	2
Balmerino, Cooling-trough near,	144	Campbell, H. R., death of,	160
Balnabruich, Site of Chapel at,	27	Carnofoty Hill,	35, 36
Balvraid, Stone Hatchet from,	31	Castle Corbet, and others, in Tarbat Ness area,	28
Bank, broad, for defence of stock,	19	Castle Crag, Small Fort at,	106
Barclay of Luthrie, David, Tomb Slab of,	46	Castleshaw, Fort at,	105 n.
Barnett, Rev. T. Ratcliffe, death of,	160	Cemetery at Balintore,	26
Barty's Peel,	42 n., 43	Chalmers, Agnes and Isobel, Tomb Slab of,	126
Bastels as distinct from "peles,"	39 and n.	— Francis, death of,	2
Beacon at Chester Hill Fort,	72	Chalmers-Jervise Prize,	7, 163
Beaton, Lieut.-Colonel Angus J., death of,	2	Chambered Cairn at Kinriva,	30
Bellingham, Colonel, donation by,	152	Chapels in Tarbat Ness area,	27
Bishop's Cross, near Aberdeen,	35	Chaplin, Mrs Dorothea, death of,	2
Black Middens Pele,	42	Chester Hill Fort, Hundleshope, in Manor Parish, Excavations at,	66-73
Bones, Human, adapted for use as artifacts,	21		
Boundaries, cross-stones for,	34, 35		

	PAGE		PAGE
Childe, Professor V. G., on a Bronze Worker's Anvil and other Tools, . . .	8-11	Distribution of brochs in relation to pasture land, . . .	28
Christison, James, death of, . . .	2	Ditch for protection against wolves, . . .	18
Church lands of Kingoldrum, Boundaries of, . . .	34, 35	Dog-kennel, . . .	18
Circular form of Wag, distribution of, . . .	19	Doig, Dr R. Stevenson, donation by, . . .	153
Clanruald Collection of Family and Jacobite relics, . . .	6	Donations to Museum, . . .	151-6
Coin-boards at Broomholm, etc., . . .	105 and n.	— to Library, . . .	157-8
Cokayne Collection, purchase of Trade Tokens from, . . .	150	Dornoch, Prehistoric sites near, . . .	31
Colmag, St., . . .	27	Dragendorff, Professor H., death of, . . .	2
Colman, St., . . .	27	Duff House, Incised slab at, . . .	44
Colonsay, Duns and megalithic sites in, . . .	83 ff.	Dumbreck, Castle of, . . .	122
— Field Work in, . . .	83-103	Dunbar, Bishop Gavin, Tomb of, . . .	121
Cookson, W. D., donation by, . . .	155	Dùn Cholla, Colonsay, . . .	90, 91
Cooling-trough, near Balmerino, . . .	144	Duns in Colonsay, . . .	85 ff.
Copes on incised slabs of priests, . . .	50, 51	— in Islay, . . .	80, 97 ff.
Corthie Castle Pele, . . .	42	— in Oronsay, . . .	86, 92
Coronations, beginnings of, . . .	75		
— Inauguration of Alexander III., . . .	73-82	Earthhouse, at Orphir, . . .	143, 144
Cows or cattle, accommodation for, . . .	19	Earthwork, at Greenan, . . .	33
Crag, Pele at, . . .	42	East Lothian, Pottery from, . . .	143
Craig, Thomas, Pursulvant, Tomb Slab of, . . .	125	Economic relation of wags to brochs, . . .	22
— William, Rothesay Herald, Tomb Slab of, . . .	125, 126	Edgerston Fort, . . .	72
Creich, Fife, Incised slab at, . . .	46	Ellon Castle, Gunloops at, . . .	122 n.
Creich Castle, Fife, . . .	144	Eskdale, Roman road in, . . .	116, 117
Cross, The Abbot's, Lintathen, . . .	34-6	Evis, Orkney, Pottery from, . . .	142
Cross Kirk, Peebles, original plan, . . .	63	Evisones, Pele at, . . .	41, 42
— — burning and repair, . . .	55, 56, 66	Exhibition planned, . . .	3
Cross-stones, Boundaries marked with, . . .	34, 36	— "From the Stone Age to the '45," . . .	4
Cultural relation of wags to brochs, . . .	21	— Guide to, . . .	4, 5
Cumming, George A., Note on flint core Axe in Fair Isle, . . .	146-8	Fabricius, Professor Dr Ernst, death of, . . .	2
— — donation by, . . .	151	Fairbairn, Archibald, death of, . . .	2
Curio, Alexander O., on Excavation of "Wag" or Prehistoric Cattlefold at Forse, Caithness, . . .	11-25	— — donation by, . . .	156
— Dr James, bequest from his library, . . .	162	Fair Isle, Shetland, flint core Axe at, . . .	146-8
Cuthil Links, Prehistoric sites on, . . .	31	Falstone, Pele at, . . .	42
		Fellows elected, . . .	2, 160, 164
Dakers, Colin Hugh, death of, . . .	160	— deceased, . . .	2, 160
Dalruidh hut-circles, . . .	131-5	Femur head, used as a whorl, . . .	21
Dalrymple, The Hon. Sir Hew B., death of, . . .	2	— Shaft of right, used as peg for some implement, . . .	21
Dalton, O. M., death of, . . .	2	Fenton, William, on the Abbot's Cross, Lintathen, . . .	34-6
Dalziel, R. K., donation by, . . .	150	Ferretory of St Nicholas the bishop in Cross Kirk, Peebles, . . .	62, 63, 64
Davidson, J. M., on Antiquities in Easter Ross and Sutherland, . . .	25-33	Field Work in Colonsay and Islay, 1944-45, . . .	83-103
Deerness, Orkney, Pottery from, . . .	142	Fife Cooling-trough, . . .	144
"Deer Roast," . . .	14	Fire tower, for defence against wolves, . . .	15, 16
Dere Street, Engineering of, . . .	116	Flue, on wall face, not sunk, . . .	40
Dinglehowe, Deerness, Orkney, Pottery from, . . .	142	Forbes, John, of Ardmurdo, Tomb Slab of, . . .	47
Directorship of Museum, . . .	3	— Sir John, of Tolquhon, Arms of, . . .	123
		— William, of Tolquhon, Tomb Slab of, . . .	117-22
		Forestry Commissioners, donation by, . . .	151
		Forse, Caithness, Wag at, . . .	11-25

	PAGE		PAGE
Fort William, Jacobite Ring at,	129, 131 n.	Horne, Miss C. H. Maule, donation by,	156
Fort or duns in West Highlands, dating of,	92	Hostels for pilgrims, at Peebles,	53
Four Peers ring,	129	Hundleshope, Excavations at Chester Hill	
Foveran, Incised slab at,	44, 45	Fort,	66-73
Gallow Burn,	35, 36	Hut-circles,	131-5
Galychtly, John, Tomb Slab of,	46	— roofing of,	133, 134
Gardner, William Reid, death of,	160	Imlach, A. F., donation by,	154
Gardyne, Thomas, Minister at Tarves,		Inchcape, Lord, donation by,	152
Tomb Slab of,	126	Incised Slabs (II), Notes on Scottish,	43-66
Garvard (Colonsay), Duns at,	90	Ingoldsby, Mrs F., donation by,	153
— Standing Stones at,	84	Iron House, ruins of,	40
Gatehouse, Pele at,	37	Islay, Duns in,	80, 97 ff.
Gatehouses at Chester Hill Fort,	71	— Field Work in,	83-103
Geanies, Maids of, Castle site at,	28	— Standing Stones in,	160
Gelkie, Harold S., donation by,	153	Jackson, George E., death of,	2
Giant's Grave, Colonsay,	83	Jacobite Relics (Channanald Collection),	6
Gibb, Sir Alexander, death of,	160	— Rings,	127-31
Glenlue, Pottery from,	143	— rising of 1745,	3
— Sands, purchase of finds from,	156	Johnson, N. M., Note on Cooling-Trough in	
Golspie Links, Arrow-heads from,	32	Fife,	144
Graham, A., Notes on Some Northumbrian		Keef, Miss P. A. M., on Excavations at	
Peles,	37-43	Chester Hill Fort, Hundleshope, in	
Grain, Consumption of,	14	Manor Parish,	66-73
— Cultivation of,	22	Keeper of Museum, office of,	161
Grant of Trumland, Walter G., donation by,	151	Kenny's Cairn, Caithness, Pottery from,	142
— Will, death of,	160	Kerr, Henry F., death of,	160
Grave, Gallery, in Islay,	98, 99	Kershaw, Mrs E. N., death of,	2
Graves, Passage, Types of,	96, 97	Ketchen, W. T., death of,	160
Grave Slab: <i>see</i> Tomb Slabs.		Kilchattan (Colonsay), Duns at,	87, 89
Greenan, Cairn and Earthwork at,	33	Kilmagad Farm, Kinross-shire,	145
Greenhill, F. A., Notes on Scottish Incised		Kingoldrum, Parish of,	34, 35
Slabs (II),	43-66	Kinkell, Tomb Slab of Gilbert Grenlan in	
— ——— Note on Windmill at Whithorn,	144	church of,	43
— ——— William, death of,	160	Kinriva, Chambered Cairn at,	30
Grenlau, Gilbert, Bishop of Aberdeen,	46	Kinross-shire, Urn-Burial,	145, 146
— ——— Esquire, Tomb Slab of,	43-8	Kirkness, William, donations by,	152, 155
Guide to the exhibition, and copies sold,	4, 5	Kitchen-midden, Mesolithic,	137
Gunner's Bar, Pele at,	42	Knighthood at coronation,	77, 80
Gunning Fellowship, Award of,	7, 163	— at King's baptism,	79, 80
Hallstatt Ware,	150	Knives, Stone, Polished, from Ward of	
Hammer, socketed,	8	Shurton, near Lerwick,	140
Hammer-stone, circular,	14	Larg, Robert James, death of,	160
Hanna, William G. C., death of,	2	Learney, Hill of, Pottery from,	148-50
Harlaw, Battle of,	46	Legge, Miss M. D., on The Inauguration of	
Hatchet, Stone, from Balvraid, near Skelbo,	31	Alexander III,	78-82
Hawkhope, Pele at,	42	Leigh, Colonel James H., death of,	2
Heath, Rev. Alban, death of,	2	Leper, Thomas, mason,	121-3
Hedderwick, East Lothian, Pottery from,	143	Lerwick, Stone Knives found near,	140
Henderson, Miss Sybil H., death of,	2	Leslie, Sheriff John Dean, death of,	160
High Rochester, Pele at,	41	Lesmoir Castle, Mason-work at,	133
Highshaw Pele,	40		
Hole Tower Pele,	38		
Hope of Luffness, Major, donation by,	152		

	PAGE		PAGE
Levie, William Elder, death of,	160	Mould, Stone,	8, 10
Lewis, Isle of, Pottery from,	141	Mountquhanie Castle, Fife,	144
Library, donations to,	7, 157-8	Museum, Reopening of,	3
— purchases for,	7, 158	— Directorship of,	3
Lindsay, John V., donation by,	151	— Sunday afternoon opening,	4
Lintrathen, The Abbot's Cross near,	34-6	— Attendances,	4
— and Kingoldrum, Boundary between,	35	— An educational institution,	5
Little Lough, Pele at,	42	— Closing of,	6
Lockie, J. R., donation by,	155	— Accessions to,	6
Loney, John W. M., death of,	160	— donations to,	151-6
Longforgan, Incised Slab at,	46	— purchases for,	156
Loos, Mrs H. R., donation by,	154	Myrtle, Rose B., donation by,	153
Lowat Ring,	127		
Lowleam, Pele at,	42	National Art Collections Fund, donation	
Lyon, Mr Robert, Mourning Ring for,	128	by,	153
		Naversdale, Orkney, "Earth-house" at,	143, 144
MacAskill, John, donation by,	153	Netherby, Roman Roads at,	116, 117
Macdonald, Flora, Ring of,	128	Nicholas, St, feretory of, at Peebles,	52, 63, 64
MacIain, Iain, of Ardnamurchan, Effigy of,	46	Nicol, David, donation by,	152
Mackenzie, Colonel, donation by,	153	Norse invaders, Defence against,	93 n.
— Thomas, death of,	2	Northumbrian Peles, Notes on Some,	37-43
M'Laren, J. C., donation by,	153		
— Mrs, donation by,	155	Oblong form of Wag, distribution of,	19
MacLean, Rev. John, death of,	160	Oliphant, Ebenezer, Edinburgh, Gold-	
M'Leish, Robert A., death of,	160	smith,	129
MacLeod, Sir John Lorne, death of,	160	— Laurence, of Gask, Ring of,	128
MacLeod, Rev. Malcolm, death of,	160	O'Neil, Bryan H. St John, Rhind Lecturer,	163
MacMaster, Thomas, donation by,	156	Ockney, Pottery from,	142
M'Nabb, Nell L., death of,	2	Oronsay, Duns and megalithic sites in,	83 ff.
Macrae, Rev. Duncan, death of,	2	Orphir, Orkney, "Earth-house" at,	143, 144
Machrius (Colonsay), Duns at,	90		
Malcolm, Colonel George Ian, of Poltalloch,		Paisley, Mediaeval Pottery found,	140
gifts by,	6	Palstave Mould,	10
—, Sir Ian, of Poltalloch, death of,	2	Peebles, a place of pilgrimage,	52, 53
Manor Water district, regional Survey of,	73	See also Cross Kirk.	
Marshall, John N., death of,	2	"Pele," use of word,	37
Marwick, H., note on "Earth-house" at		— Normal type of,	39
Orphir, Orkney,	143, 144	— Use of,	39
Mary, Queen of Scots, her journey to		Peles, Northumbrian,	37-43
Hermilage,	111 n.	Piggott, Stuart and C. M., on Field Work in	
Mathew, James, death of,	2	Colonsay and Islay, 1944-45,	83-103
Mathieson, John, death of,	2	Pigmies Isle, Lewis, Pottery from,	141
Mayes, W. P., note on Mediaeval Pottery,	140	Pilgrims' hostels at Peebles,	53
Medallions, commemorative,	130	Pit in shell-heap at Polmont,	136, 138, 139
Meft Farm, Morayshire, Pottery from,	142	Polmonthill, Shell-heap at,	135-9
Megalithic Monuments in Islay,	98	Portmahomack, Chapel site at,	27
— Sites in Colonsay and Oronsay,	83	Pottery, Early, notes on,	141-3
Mesolithic period, Midden of,	137	— Iron Age, from Sundaywells, Aber-	
— Flint core Axe,	146-8	deenahire,	148-50
Mills, Alex., donation by,	151	— Mediaeval, found in Paisley,	140
Minority, Coronation of Kings during,	75-8	Prehistoric Sites near Dornoch,	31
Moar, Peter, note on Polished Stone		Pundar's Cairn,	35, 36
Knives,	140, 141	Purchases for Museum,	156
Morayshire, Pottery from,	142	— for Library,	158
Moreton, Captain L. L. E., donation by,	152	Purdie, Thomas, death of,	160

	PAGE		PAGE
Querns for grinding corn,	14	Shilla Hill, Pele at,	42 n.
— Rotary, Distribution of,	21, 22	Shittlebough, Pele at,	41
— Saddle, Distribution of,	21, 22	Shrines of St Nicholas, Peebles,	50
— — at Portmahomack,	30	— of St Waltheof at Melrose,	52
— — at Tarbat Ness,	30	Shurton, Ward of, near Lerwick, Stone Knives found,	140
Quig, Rev. Gordon, death of,	160	Simpson, Dr W. Douglas, on The Tolquhon Aisle, and Other Monuments in Tarves Kirkyard,	117-26
Raeburnfoot, Forts at,	103-6	— — Note on Pottery from Sundays- wells Hill, Aberdeenshire,	148-50
Raistane Well,	35, 36	Skelbo, Stone Hatchet from Balvraid, near,	31
Randall-MacIver, David, death of,	2	Skinner, Robert Taylor, death of,	160
Ratcliffe, Joseph Riley, death of,	160	Skitten, Caithness, Pottery from,	142
Rattenraw, Pele at,	42	Slabs, Notes on Scottish Incised,	43-66
Raw, Pele at,	40	See also Tomb Slabs.	
Ray, Ray Fell, Pele at,	42	Smith, Alexander, death of,	160
Redesdale, Peles in,	41	— Samuel, donation per,	153
Relics at Cross Kirk, Peebles,	54	Snablaugh, Pele at,	42
Rennie, Miss Divina, donation deposited by,	155	Socket-stone,	15
— Robert, donation by,	155	Souter, George, death of,	2
Reoch, John, death of,	2	Spear-head,	8
Rhind Lectureship,	7, 163	Spittal-on-Rule, Flue applied to face of wall in old cottage at,	40
Richardson, James S., donations by,	151, 153	Standing Stones in Islay,	100
Richmond, Dr I. A., on A New Roman Mountain-Road in Dumfriesshire and Roxburghshire,	103-17	— — at Garvard (Colonsay),	84
Robertson, W. G. Aitchison, death of,	100	Stanners Burn, Pele at,	42
Robison, Joseph, death of,	2	Stephen, Rev. William, death of,	160
Roman Mountain-Road in Dumfriesshire and Roxburghshire,	103-17	Stevenson, Robert B. K., appointed Keeper of the Museum,	161
— Road: construction methods,	110, 114-6	— — on Jacobite Rings,	127-31
— Signal-towers,	113	— — on a Shell-heap at Polmont Hill, Falkirk,	135-9
Roofing of Hut-circles,	133, 134	— — Note on Early Pottery,	141-3
— of Wags,	18	— — on Urn-Burial at Scotlandwell, 145, 146	
Roses Bower, Pele at,	42 and n.	Stewart, Prince Charles Edward, Bust in relief on a medallion,	127
Ross, Easter, Antiquities in,	25-31	Stell, Wm., donation by,	150
Roxburghshire, Pottery from,	143	Stone Circle at Ascoile,	33
Rusk, J. M., death of,	160	Structural relation of wags to brochs,	21
Russell, John, death of,	100	Stuart, Alexander, donation by,	155
St Colman (Colmag),	27	Sundayswells Hill, Aberdeenshire, Pottery from,	148-50
St Nicholas, feretory of, at Peebles,	62, 63, 64	Sutherland, Antiquities in,	31-3
St Waltheof's Shrine at Melrose,	52	Swags, Panel with, bearing devices,	40
Saddle-querns: see Querns.		Swan, T. Alkman, death of,	2
Scalaunig (Colonsay), Duns at,	38	Symbolic protection,	140
Schivas, House of,	122	Tarbat Ness, Sites of chapels at,	27
Scone, Coronations at,	74, 75	Tarset Burn, Group of Peles on the,	42
Scotlandwell, Urn-Burial at,	145, 146	Tarves, Kirk of, Description of,	117, 118
Scottish Incised Slabs (II), Notes on,	43-66	Thorburn, Lieut.-Colonel William, death of,	2
Sennachie, office of,	74, 75	Thornycroft, Wallace, Further Observa- tions on Hut-Circles,	131-5
Service, Douglas, donation by,	156	Thropton, Pele in village of,	40
Seton Ring,	127	Thyne, James Cowan, death of,	160
Shand, Elizabeth H. D., bequest by,	155		
Shell-heap at Polmont Hill, Falkirk,	135-9		
— Significance of pit in,	136, 138, 139		
Shtetelig, Professor Haakon, Rhind Lecturer,	163		
Shetland: see Fair Isle.			

	PAGE		PAGE
Tillyhilt Castle, Mason-work at,	123	Urn-Burial, Encrusted, at Scotlandwell,	145, 146
Tipperwhig,	35, 36	Urquhart, Morayshire, Pottery from,	142
Tolquhon Aisle and Other Monuments in Tarves Kirkyard,	117-26	Uyen Bjorgs,	141
Tomb of Bishop Gavin Dunbar,	121		
— Chambered, in Islay,	97	Wag at Forse, Caithness,	11-25
— Mort's head motif on,	120	— Derivation of word,	11
— Slab, Sculptured, near Ballone,	28	— Distribution of,	25
— — in Tarves Kirkyard,	125	— Relation to Broch,	21-5
— — reversed and re-used,	47	— Use of, for summer shieling,	24
— — of Agnes and Isobel Chalmers,	126	Wallace, D. S., donation by,	153
— — of Thomas Craig, Pursuivant,	125	Warrack, Malcolm, death of,	160
— — of William Craig, Rothesay Herald,	125, 120	Waterhead, Pele at,	42
— — of John Forbes of Ardmurdo,	47, 48	Watson, John H., death of,	2
— — of Thomas Gardyne,	126	Watt, Dr James, death of,	160
— — of Gilbert Grenlau, Esquire,	43-8	Wemyss, Earl of, donation by,	152
Tower, Fire, for protection against wolves,	15, 16	West Woodburn, Pele at,	41
Trade Tokens, purchase of,	156	Weston, Percy William, death of,	160
Tradition, survival of, regarding pre- historic cemetery,	26, 27	White, Colonel A. C. T., donation by,	156
Trimontium, convergence of Roman Roads at,	116, 117	Whithorn, Windmill at,	144
Trinitarians at Peebles,	51, 53, 64	Wigtownshire, Pottery from,	143
Tumulus at Caddellmount,	25	Windmill at Whithorn,	144
Tynedale, North, "Peles" in,	42	Wolves, Pack of, protection against,	16, 17, 18
		Woodhouse Pele,	39
Udny, New church at,	121, 122		
Urugaig (Colonsay), Duns at,	87, 88	Young, A. J., donation by,	156





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TABLE OF CONTENTS

	PAGE
Notice of Two Standing Stones (one with Pictish Symbols) on the Lands of Peterhead Farm, near Gleneagles, Perthshire. By CHARLES S. T. CALDER, A.R.I.A.S., F.S.A.Scot., . . .	1
Account of the Excavation of Bronze Age Cists at Pinnaclehill, Kelso. By CHARLES S. T. CALDER, A.R.I.A.S., F.S.A.Scot. With a Report on the Skeletal Remains, by Dr W. C. OSMAN HILL,	7
A Stone Age Settlement at the Braes of Rinyo, Rousay, Orkney. (Second Report.) By Professor V. G. CHILDE, D.Litt., D.Sc., F.B.A., F.S.A., F.S.A.Scot., and WALTER G. GRANT OF TRUMLAND, F.S.A.Scot.,	16
The Horizontal Water-Mill at Dounby, on the Mainland of Orkney. By STEWART H. CRUDEN, A.R.I.B.A., F.S.A.Scot.,	43
Some Observations on the Brochs. By A. GRAHAM, M.A., F.S.A., F.S.A.Scot.,	48
Notes on Scottish Incised Slabs (III). By F. A. GREENHILL, M.A.(Oxon.), F.S.A.Scot.,	99
Further Note on the Birthbrief of Walter Innes. By Sir THOMAS INNES OF LEARNY, K.C.V.O., F.S.A.Scot., Lyon King of Arms,	114
Scottish Episcopal Communion Tokens. By R. KERR, M.A., F.S.A.Scot., <i>Curator of Coins</i> , and Rev. J. A. LAMB, B.D., Ph.D., F.S.A.Scot.,	118
Note on the Bluidy Banner or Haughhead Banner. By Miss E. M. MEIN, B.L., F.S.A.Scot.,	134
Excavations in Two Homesteads at Crock Clouch, Roxburghshire. By K. A. STEER, M.A., Ph.D., F.S.A., F.S.A.Scot., and G. S. KEENEY, M.A., B.Litt.,	138
Farms and Fortifications in the King's Park, Edinburgh. By ROBERT B. K. STEVENSON, M.A., F.S.A.Scot., <i>Keeper of the Museum</i> ,	158
Notes:—	
1. A Late Bronze Age Spearhead Mould from Campbeltown. By Mrs C. M. PIGGOTT, F.S.A., F.S.A.Scot.,	171
2. A Late Bronze Age "Razor" from Orkney. By Mrs C. M. PIGGOTT, F.S.A., F.S.A.Scot.,	173
3. Inscribed Panel at South House, Liberton. By CHARLES S. T. CALDER, A.R.I.A.S., F.S.A.Scot.,	174
4. Some Late Bronze Age Burial Cairns at Musselburgh. By ROBERT B. K. STEVENSON, M.A., F.S.A.Scot., <i>Keeper of the Museum</i> ,	174
5. A Cist containing Skeletal Remains at Bonhill, Dunbartonshire. By STUART M. K. HENDERSON, Ph.D., B.Sc., F.S.A.Scot.,	178
6. "Lop-sided" Arrow-heads. By ROBERT B. K. STEVENSON, M.A., F.S.A.Scot.,	181
7. New Vitriified Forts. By A. GRAHAM, M.A., F.S.A., F.S.A.Scot.,	182
8. Cist Burial at Bo'ness. By ROBERT B. K. STEVENSON, M.A., F.S.A.Scot.,	182
9. An Iron Implement and other Relics from Falla Cairn, Roxburghshire. By KENNETH A. STEER, M.A., Ph.D., F.S.A., F.S.A.Scot.,	183
10. A Short Cist at Abernethy, Perthshire. By ROBERT B. K. STEVENSON, M.A., F.S.A.Scot.,	185
11. Viking Markers in S.E. Newfoundland. By MAURICE P. DUNLAP, M.A., F.S.A.Scot.,	186
12. <i>A Survey and Policy of Field Research in the Archaeology of Great Britain.</i> Part I. Note by K. A. S.,	188

TABLE OF CONTENTS

	PAGE
Donations to and Purchases for the Museum, 1946-1947,	189
Donations to and Purchases for the Library, 1946-1947,	197
Anniversary Meeting, 1947,	201
Annual Report for 1946-1947,	202
Meetings of the Society,	207
Index,	209
List of Books available for Purchase,	213

LIST OF ILLUSTRATIONS

	PAGE		PAGE
Peterhead Farm, Gleneagles (Standing Stones): map of sites,	1	Incised Slabs: Aberdalgie slab (details), Pl. XIII, 1, 2,	102
— Drawing of symbols,	3	— Abbey of St Bavon, Ghent, Pl. XIII, 3,	111
— Diagrams of types of symbols,	4	— Man in armour, Stobo, Peebles-shire,	112
— Comb and "Rectangular" symbols,	5	— Mill-rind, Stobo,	112
— Standing Stones, Pl. I,	6	— Robert Vessy, vicar of Stobo,	112
Pinnacle Hill, Kelso: mound at, Pl. II, 1,	7	Birthbrief of Walter Innes, Pl. XIV,	114
— Fragments of Upper Cist, Pl. II, 2,	8	Scottish Episcopal Communion Tokens, 128-133	
— Lower Cist, Pl. II, 3,	8	Homesteads at Crock Cleuch, Roxburgh-shire: map of site,	140
— Plan of Site,	10	— East Homestead (plan),	143
— Bronze Age grave, plans and section,	10	— Face of enclosure wall, Pl. XV,	144
Rinyo: Plan of excavated areas, <i>facing page</i>	16	— Entrance to hut, Pl. XVI,	144
— Sections,	17	— Paving and hearth, Pl. XVII,	145
— Dwelling G, Deposit 6,	22	— Plan of hut,	147
— Hearth and drains (E), looking south and west, Pl. III,	24	— West Homestead (plan),	149
— Slab, hearth, etc. (F), Pl. IV, 1,	24	— Plan of hut,	150
— Secondary "pavement" (G), Pl. IV, 2,	24	— Sections,	153
— Bed, hearth, etc. (G), Pl. V,	24	— Pottery and other finds,	153
— Hearth, drains, etc. (G), Pls. VI, VII,	24	Farms, etc., in King's Park, Edinburgh: map, Pl. XVIII,	160
— "Pavements" (G), Pl. VIII,	24	— Air photo of Arthur's Seat, showing dyke, terraces, etc. Pl. XIX,	160
— Walls (G), Pl. IX,	24	— Terraces and enclosures (with sections), <i>Folder</i> ,	160
— Fragments of Pottery, Pl. X,	24	— Scooped enclosure and terraces, Dunsapie,	163
— G area, Deposit 5,	26	— Defensive dyke,	169
— G area, structures below Deposit 5,	26	— Hut-circles on the Dasses,	169
— Sections of pottery from G area,	35	— "Razor" and spearhead cast from the Campbeltown mould, Pl. XX, 1,	174
— Sections of pottery from K area,	38	— <i>facing page</i>	174
— Flint Implements,	40	Bronze razor from Orkney, Pl. XX, 2,	174
— Rubbing-stone from G,	41	Window with panels, South House, Liberton, Pl. XX, 3,	174
Horizontal Water-mill, Dounby: Pins of mill-wheel, Pl. XI, 1,	44	Bronze Age Burial Cairns, Musselburgh: map of sites,	174
— Hopper and mill-stone, Pl. XI, 2,	44	— Urn No. 3, Pl. XXI,	175
— Mill and entrance, Pl. XII, 1, 2,	44	— Urn No. 1,	175
— Mills at Sandness, Sutherland, Pl. XII, 3,	44	— Urn No. 2,	176
— Sections,	45		
— Plan,	48		
Scottish Brochs: Sketch Map, showing regions,	50		
— Disposition of cell-entrances,	59		
— Interior elevation of Dun Telve,	83		
Incised Slabs: Sir William Olifaunt,	101		

	PAGE		PAGE
Bronze Age Burial Cairns, Musselburgh:		Food-vessels from Edgerston, Roxburghshire,	192
Section through Cairn 2,	177	Silver hand-pin, Freewick, Caithness,	192
Arrow-heads: from Killellan, Renfrewshire,	180	Bronze stud, Newstead Fort,	192
— from Culbin Sands, Morayshire,	181	Pottery from Olnessfirth, Shetland,	192
Viking markers in Newfoundland: map of		Penannular "lock-ring" from Boghall,	
Avalon peninsula,	187	Lanarkshire. Pl. XXIV, 1, . <i>facing page</i>	196
— — — — — Icelandic map showing "Wine-		Impression from seal matrix of Henry, Bishop	
land." Pl. XXII, 3, <i>facing page</i>	188	of Aberdeen. Pl. XXIV, 2.	
— — — — — Memorial stones (the markers).		Electrotype of "Kames Brooch." Pl.	
Pl. XXIII.		XXIV, 3.	
Urn from Falls Cairn, Roxburghshire. Pl.		Bronze strap-end, from Freewick, Caithness.	
XXII, 1.		Pl. XXIV, 4.	
Food-vessel from Abernethy, Perthshire. Pl.		Early Iron Age bronze scabbard, from Bar-	
XXII, 2.		gany, Ayrshire (with enlargement). Pl.	
Part of slab with oghams, from Whiteness,		XXV.	
Shetland. Pl. XXII, 4.			

I.

NOTICE OF TWO STANDING STONES (ONE WITH PICTISH SYMBOLS) ON THE LANDS OF PETERHEAD FARM, NEAR GLENEAGLES, PERTHSHIRE. BY CHARLES S. T. CALDER, A.R.I.A.S., F.S.A. SCOT.

Read May 12, 1947.

Two stones, situated to the south of the main road about half-way between Blackford and Auchterarder, are noted as "Standing Stones" on the 6-inch O.S. Map of Perthshire, Sheet No. CXVIII, S.W. They are separated from each other by a distance of 400 yards, and stand in arable ground on the lands of Peterhead Farm (fig. 1).



Fig. 1. Map of Sites.

The one that stands in the field bounded on the north by the Black Plantation and on the east by the farm road is a featureless weather-worn boulder (Pl. I, 1). Somewhat cylindrical in form with a girth of 7 feet at the base, it rises with a decided tilt towards the west to a height of 3 feet 10 inches above ground-level. No artificial markings appear on its surface, and its inclusion here is for record purposes only on account of its likeness to, and

its close association with, the second stone, which is of main interest in having two Pictish symbols incised upon it.

This second stone is also a boulder which is badly pitted and weathered from many centuries of exposure (Pl. I, 2). It stands in a field in a conspicuous position 15 yards from the main road and 150 yards west-south-west of the cross-roads at Loaninghead. On plan it is roughly oblong, with average dimensions of 3 feet from north to south and 2 feet 6 inches from east to west, and it measures in girth 10 feet 9 inches at base and 6 feet 11 inches at top. In its height of 5 feet above ground-level it tilts westwards at an angle of 20°.

Towards the top of its north side the symbols have been incised one above the other; it is highly probable that they were made after the stone itself had long existed as a standing stone, and so far as I am aware they have not previously been recorded (Pl. I, 3). Both have been cut in a strong deep line, but the upper one is so much defaced by weathering that its form is not easily detected at first sight. Nevertheless, from a careful study on the spot it becomes distinct enough to be deciphered as the representation of a goose (fig. 2). The bird has been delineated with considerable skill and artistic merit in graceful outline from the tail to the head, which is turned rearwards and reposes on the back. The line of the wing is evident, and the legs can just be made out but the feet are not clearly seen, nor is the underside of the head and neck. The figure occupies almost the full width of the top of the stone, and measures 13½ inches from the tail to the much weather-worn breastline and 9½ inches approximately from the head to the feet.

A goose is of rare occurrence on Pictish symbol stones; only two other examples have been recorded, and in my opinion one of them bears more resemblance to a duck (fig. 3). The latter, figured No. II on the drawing, is carved on a stone at Tillytarmont in Aberdeenshire;¹ the other, No. I, is at Easterton of Roseisle in Elginshire,² and is portrayed with the head turned backwards in similar manner to the one under review.

The lower symbol, placed towards the left-hand side of the stone, begins just below the feet of the goose and terminates an inch or so from the edge (fig. 2). It resembles a grid divided into three equal panels by two horizontal lines, and measures 10½ inches wide by 8½ inches high, the bottom being 2 feet 10 inches above ground-level. The design represents the double-toothed comb which is symbolised likewise on other sculptured stones although generally of smaller dimensions. The average size would appear to be about 5 inches by 3½ inches, omitting two unusually large ones at Covesea Cave, Elginshire, and The Maiden Stone, Aberdeenshire, which measure respectively 16 inches by 10 inches and 11½ inches by 6¾ inches and thus compare with the outsize reproduction on the Peterhead Farm stone.

¹ *Early Christian Monuments of Scotland*, Pt. III, p. 188, fig. 201.

² *Ibid.*, Pt. III, p. 126, fig. 130A; *Proc. Soc. Ant. Scot.*, vol. lxxiv., pl. xv, a, facing p. 64.

NOTICE OF TWO STANDING STONES NEAR GLENEAGLES. 3

The comb symbol is very frequently depicted, usually in association with a mirror but not always so. In the *E.C.M.* Romilly Allen records and illustrates eleven single- and sixteen double-toothed varieties. Six different

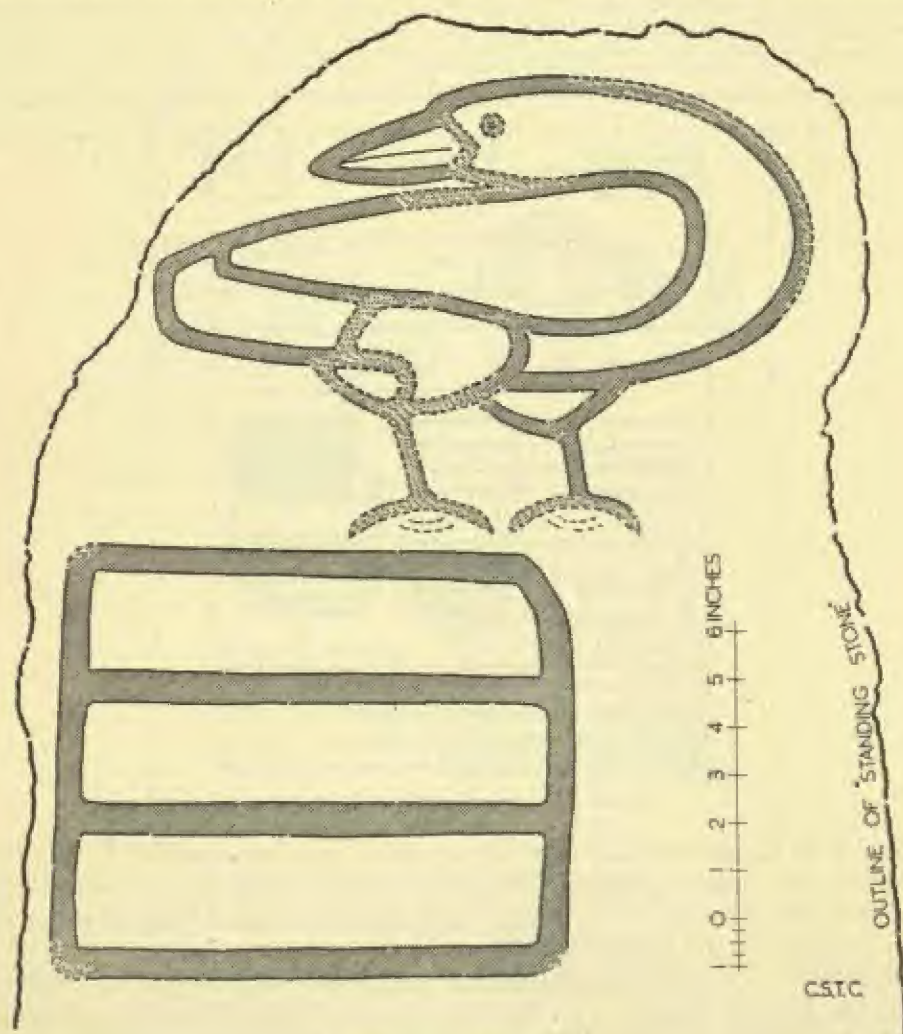
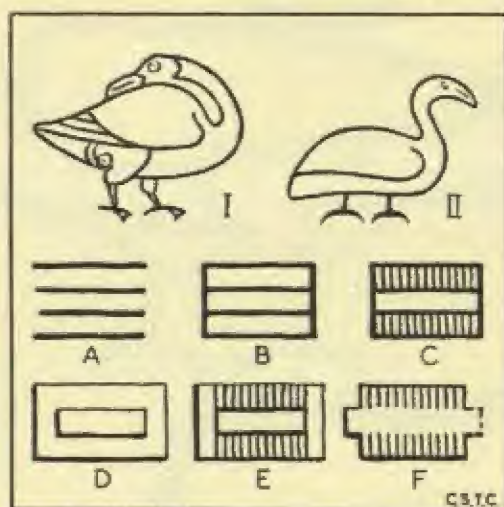


Fig. 2. Drawing of the Symbols.

representations of the latter type are noticed and are lettered from A to F on the diagrams (fig. 3). A, B, C are incised examples and D, E, F are in low relief, with the exception of one at Covesea Cave, which is also incised. It has been described as a rectangular symbol and not as a comb, but being associated with two mirror-case symbols and agreeing exactly in shape with

Type D it obviously must be reckoned within the comb group. Types A and F occur only once each. Regarding the so-called "rectangular symbols," of which there are fifteen examples, these have the appearance of decorated leather wallets, in some cases with flaps as in fig. 4, F, G, and I, and in others with thong-lacing as in fig. 4, F and J. It may not be out of place here to suggest that they are intended to represent comb-cases on the analogy of the mirror-cases. In shape, at all events, the design is reasonably proportionate to the comb symbols (fig. 4), and in size the average dimensions are not much



I EASTERTON OF ROSEISLE, ELGINSHIRE
 II TILLYTARMONT, ABERDEENSHIRE
 ABC TYPES OF DOUBLE-TOOTHED COMBS INCISED
 DEF Do. Do. IN LOW RELIEF

Fig. 3. Diagrams of Types of Symbols.

larger. It is to be observed that the comb C and the symbol H are both carved on the same stone, and the use of comb-cases at an early date is attested by the finding of an ivory comb and case in a Viking grave of the eighth century at the Bay of Skaill in Orkney.¹

"Symbols . . . including the mirror and comb were carved on funerary slabs in the Roman Empire . . . and were used in Early Christian symbolism too."² In Christian times "The comb had a ceremonial use in the ritual of the Church. . . . It was one of the symbolic relics buried with ecclesiastical personages. . . . St Cuthbert's comb was buried with him."³ In a letter from Pope Boniface to Queen Ethelberga, c. 625, he concludes with

¹ *Inventory of Ancient and Historical Monuments in Orkney and Shetland*, Introduction, fig. 8, pl. 5, and Orkney article No. 767. *Proc. Soc. Ant. Scot.*, vol. xxii, p. 284, fig. 1.

² *Proc. Soc. Ant. Scot.*, vol. lxxiv, p. 65.

³ *F.C.M.*, p. xxxvi.

the following passage: "We have, moreover, sent you the blessing of your protector, St Peter, the prince of the apostles, that is a silver mirror and a gilt ivory comb. . . ." ¹

Not all comb symbols, however, can be ascribed to the Christian era in Scotland, but only those examples which appear with crosses may be so

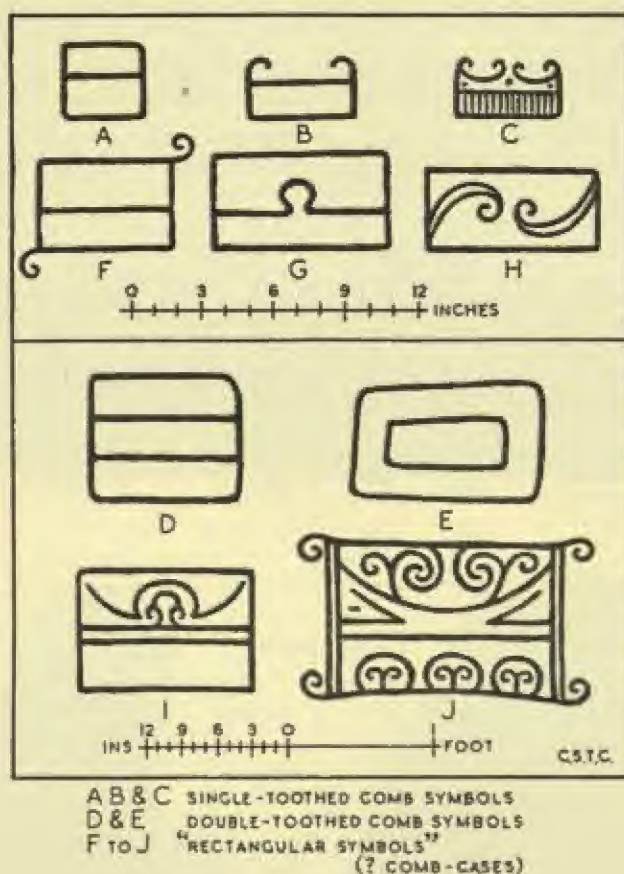


Fig. 4. Comb and "Rectangular" Symbols.

related. These consist entirely of double-toothed combs sculptured in low relief and, according to Mrs Cecil L. Curle, "the earliest possible date . . . may be accepted as sometime in the fifth century"; ² those which are incised are the exceptions, none of which appear in conjunction with crosses.

It may be a point of some significance that the exceptions comprise the whole range of single-toothed and half of the double-toothed comb symbols,

¹ Bede [B II, C 12, A.D. 625].

² *Proc. Soc. Ant. Scot.*, vol. lxxiv. p. 62.

all of which are found only on rude natural boulders, slabs, pillars and rock surfaces. Romilly Allen places them in his Class I of Symbol Stones, which he and other authorities have no hesitation in regarding as the earliest type, presumably pre-Christian, in the area of their distribution. To this category and period, then, the Peterhead Farm symbols may be assigned.

A list of the stones on which the comb and rectangular symbols occur, with reference to their position in the *E.C.M. of Scotland*, Pt. III is appended. Letters within brackets in the items below accord with those of the diagrams, figs. 3 and 4. All the rectangular symbols are incised, and only one, Golspie, occurs on a cross-slab.

Single-toothed.

County.	Place.	Page.	Fig.	County.	Place.	Page.	Fig.
Sutherland	Clynnemilton (No. 2)	40	37	Aberdeen	[C] Newbigging Leslie	177	102
"	Kintradwell (No. 3)	44	42	"	[B] Park	180	195
"	Golspie ¹			"	Rhynie	183	198
Elgin	Easterton of Roseisle	126	130	Forfar	Aberlemno (No. 1)	205	221
Banff	Inveravon (No. 2)	153	159	"	Dunnichen	207	223
Aberdeen	[A] Daviot	161	170				
"	[A] Keith Hall	170	183				

Double-toothed.

County.	Place.	Page.	Fig.	County.	Place.	Page.	Fig.
<i>Type A.</i>				<i>Type D.</i>			
Caithness	Sandside House	29	26	Rosa	Hilton of Cadboll	62	59
<i>Type B.</i>				"	Rosemarkie	64, 65	60 A, 62
Banff	Inveravon (No. 1)	152	158	Elgin	[E] Coveasa Cave	131	135, C
Aberdeen	Bourtie	157	163	Forfar	Kirriemuir (No. 1)	227	239, B
"	Drummales	163	171	"	St Vigens	236	250, B
Perth	[D] Parkhead Farm	..	..	Perth	Meigle (No. 7)	303	316, B
<i>Type C.</i>				<i>Type E.</i>			
Sutherland	Dunrobin Castle	42	39	Aberdeen	The Maiden Stone	191	207
Inverness	Drummales (No. 2)	99	102	Forfar	Kingoldrum	226	238, B
Elgin	Upper Manbean	129	134	"	Monifeth (No. 1)	228	241, B
				<i>Type F.</i>			
				Perth	[F] Meigle (No. 1)	296	310, B

¹ Cf. *Proc. Soc. Ant. Scot.*, vol. lxxvii. p. 29, fig. 2.



1. Standing Stone (3 feet 10 inches) nearest the Black Plantation, from S.E.



2. Standing Stone (5 feet 1 inch) nearest Loaninghead, from N.W.



3. Top of Standing Stone, showing Symbols.

CHARLES S. T. CALDER.

[To face p. 6.



1. Mound at Pinnacle Hill, Kelso (diameter 140 feet).



2. Fragments of Upper Cist.



3. Lower Cist.

Rectangular Symbols.

County.	Place.	Page.	Fig.	County.	Place.	Page.	Fig.
Sutherland	[G] Sandness	4	2	Elgin	[F] Grantown	126	131
Orkney	Firth	20	16	Aberdeen	Old Deer	162	..
"	So. Ronaldsay	21	17	"	[H] Newbigging		
Sutherland	[I] Clynekirkton				Leslie	177	192
"	(No. 1)	38	34	Fife	Court Cave	370	..
"	Clynekirkton			"	Doo Cave	371	389
"	(No. 2)	38	35	"	Jonathan's Cave	372	390
"	Little Ferry			"	Sloping Cave	373	..
"	Links (No. 1)	46	44				
"	[J] Golspie	48	48, B				
Hebrides	Benbecula	111	114				

II.

ACCOUNT OF THE EXCAVATION OF BRONZE AGE CISTS AT
PINNACLEHILL, KELSO. BY CHARLES S. T. CALDER,
A.R.I.A.S., F.S.A.Scot. WITH A REPORT ON THE SKELETAL
REMAINS, BY DR W. C. OSMAN HILL.

Read December 9, 1946.

While clearing trees and shrubs from a mound in the grounds of Pinnaclehill House, the property of Lieutenant-Colonel and Lady Anne Babington, the gardener unearthed at a depth of about 9 inches under the surface of the summit two large irregularly shaped stone slabs. These were lying about 1 foot apart, with their longer axes in rough alignment north-east and south-west. A third and much smaller slab lay at the south corner of the western one, and the north-eastern one rested on the exposed tops of two other small slabs on edge. Realising that the construction might be of archaeological importance Lady Anne Babington sought expert opinion, and in September 1946 Professor Childe visited the site and advised excavation. In the temporary absence of the Director of the National Museum of Antiquities the work devolved upon me, and I desire to thank the Royal Commission on the Ancient and Historical Monuments of Scotland for permission to publish this account of the results. I also desire to thank the Society of Antiquaries of Scotland for defraying part of the expenses to make the excavation possible.

Pinnaclehill is situated on the outskirts of Kelso, slightly less than 350 yards due north of the railway station, and is approached from Cornhill Road

(fig. 1). Immediately within the entrance gates and on the north side of the drive leading to the house there is a conspicuous eminence in the shape of a truncated cone (Pl. II, 1). In size it averages 140 feet in diameter at the bottom, and measures 18 feet in height above the highest point of the drive, which cuts through its outer edge. Diametrically opposite on the north-west it measures $28\frac{1}{2}$ feet in height above the steep bank of a burn which debouches into the Tweed some 170 yards farther to the north.



Fig. 1. Plan of Site.

The mound is a natural accumulation of sand and shingle¹ with a goodly proportion of large-sized water-worn stones, and its surface seems to have been smoothed and dressed at some time or other, probably when trees and shrubs were planted on it as a feature in the lay-out of the policies.

Excavation revealed with a fair degree of certainty that stones exposed by the gardener had belonged to inhumation in at least one if not two cisted graves now very much disturbed, and that another cist of heavier construction and presumably earlier date lay at a lower level to the south-west within a foot or two of the first.

The two largest of these stones are shown marked A and B on the cross-

¹ I am indebted to Dr A. G. MacGregor and to Mr R. Eckford of the Geological Survey Department for the following confirmation: "The mound is undoubtedly of natural origin and belongs to the undulating spread of fluvio-glacial sand and gravel which extends over Pinnaclehill Park and vicinity."

section XY (fig. 2), and are indicated by a dotted line in what the gardener stated, from memory, to be their original position. He had dug down as far as the line OO. Respectively their average measurements are 4 feet 7 inches long, 2 feet 6 inches wide, and 9 inches thick, and 4 feet 1 inch long, 6 inches thick, with an extreme width of 2 feet 6 inches. The third slab mentioned above measured 3 feet 6 inches long, 1 foot 3 inches wide, and $4\frac{1}{2}$ inches thick maxima. The two slabs on edge already referred to are lettered C and D on the drawing and may have constituted two sides of an original cist, but slab C is the likelier to have been moved out of position. On plan they form an acute angle with the apex towards the south, and respectively they measure 1 foot $4\frac{1}{2}$ inches long by 11 inches high and $2\frac{1}{2}$ inches thick, and 2 feet 2 inches long, 1 foot 6 inches high, and 3 inches thick. Two other very small slabs marked F and G lay loosely upright near at hand but are insignificant. At a point E between slabs C and D a few human bones were recovered from the sand and shingle infilling. The finding of a larger quantity of human bones in circumstances described later attested more conclusively than the stones themselves the previous existence of either one or two graves. According to the report on the skeletal remains these two lots of bones represented two distinct skeletons.

Touching slab C on the north-west side a setting of laid water-worn stones H formed a ring of about 11 inches in internal diameter and resembled the packing of a post-hole. Its western margin was in close contact with a massive slab J, which turned out to be the cover-stone of the lower cist which was found intact. The cover-stone lay directly under slab A, from the bottom of which it was separated by a depth of about 10 inches of sand and shingle, but there was no obvious structural connection between them. The top of the cover-stone was barely 2 feet below the surface and was approximately on a level with the supposed bottom of the upper cist (Pl. II, 2).

On plan the lower cist was trapeziform, with the longer axis on a line running north-east and south-west and the whole lying in the south-west half of the summit (Pl. II, 3). It was constructed of four main large slabs on edge, on which the cover-stone rested, and the south-west end was strengthened by a packing of five small slabs on edge and two on bed as outlined in the drawing. The greater part of the bottom was paved with two slabs, and the remainder was just the natural sand and shingle. A paved bottom is an exceptional feature.¹ Internally the cist measured 3 feet $\frac{1}{2}$ inch and 4 feet 5 inches on the north-west and south-east sides, and 2 feet $4\frac{1}{2}$ inches and 2 feet on the south-west and north-east ends respectively and it averaged 2 feet in depth. Full dimensions of the corresponding side and end slabs are: 3 feet 10 inches long, 2 feet deep, and $4\frac{1}{2}$ inches thick; 4 feet 5 inches by 2 feet by $2\frac{1}{2}$ inches; 2 feet 2 inches by 2 feet 1 inch by $4\frac{1}{4}$

¹ Childe's *Prehistory of Scotland*, p. 106.

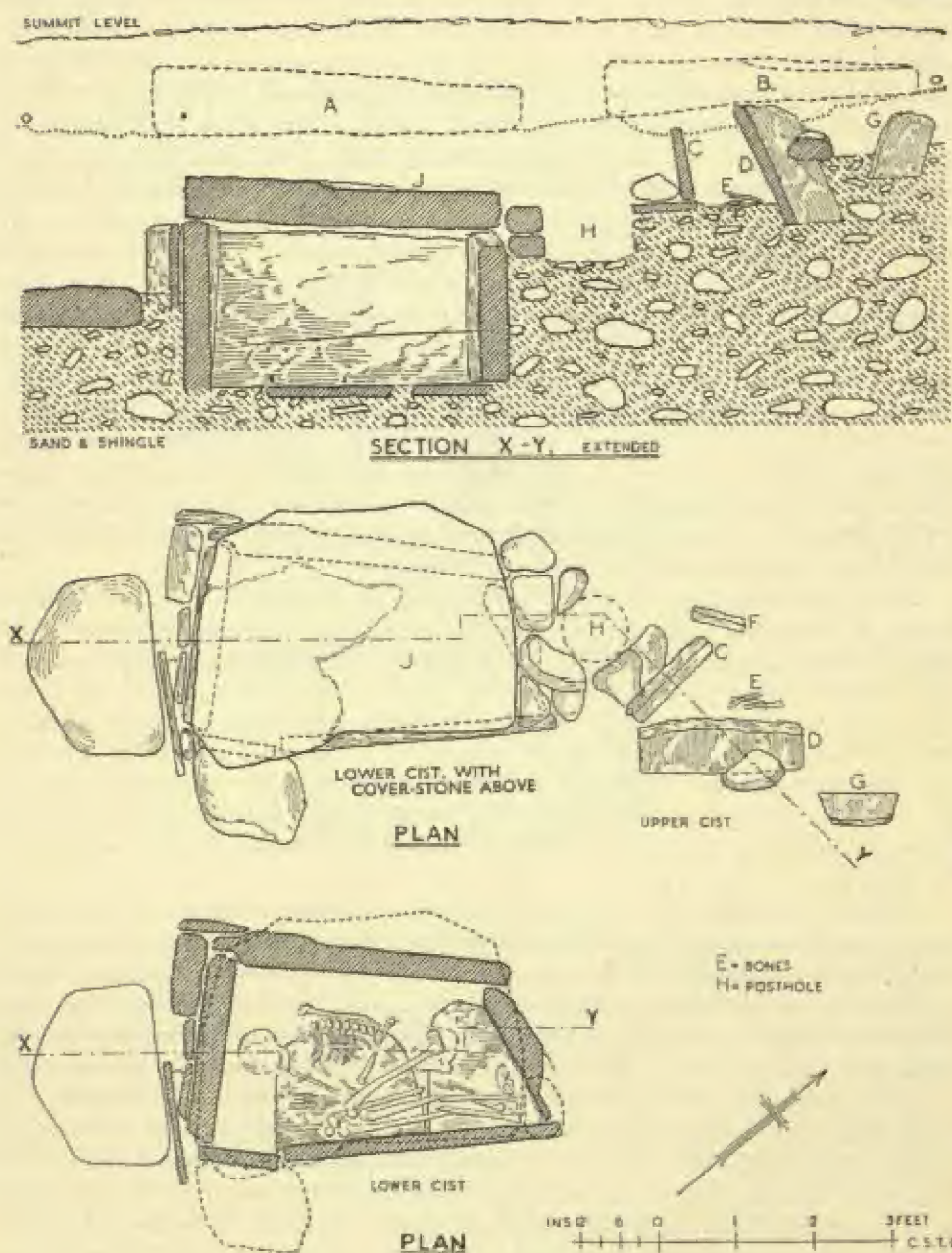


Fig. 2. Bronze Age Grave, Pinnaclehill: Plans and Section.

inches, and 1 foot 11 inches by 1 foot 10 inches by 4 inches. The cover-stone averaged 4 feet long, 2 feet 10 inches wide, and $5\frac{1}{2}$ inches thick. The western end of the north side slab was partly shouldered, probably by an accidental fracture and received the rough edge of the end slab which was itself eked out below for most of its depth by two water-worn stones one above the other filling a gap made by its slanting edge and the same side stone. The south-east side slab was broken in two 10 inches from its west end. The east end slab lay obliquely between the side slabs and formed an acute angle at the east corner, where the lowness of the adjacent ends of the slabs, together with the shortness of the cover-stone here, left in the top of the cist a small gap which if not originally was at least ultimately closed by two water-worn stones set one on top of the other.

The cist contained the fairly well-preserved remains of a male skeleton lying on its right side in a contracted position with the head to the south-west and the feet to the north-east. The body had been deposited hard up against the south-east side and rested mainly on the paving. The skull had been damaged by the flaking of a side stone, and the pedal bones were covered by small lumps of puddled clay, of reddish colour, in and on which were some bones of another skeleton and one bone of a dog. These latter constituted the quantity of other bones which earlier have been mentioned as having formed part of the upper burials. Undoubtedly these bones and the clay had been collected during the disturbance of the upper cist or cists and had been pushed through the gap in the corner of the lower cist to form the heap in which they were found. A number of small snail-shells were gathered along with the bones of the original skeleton.¹

Small tree roots had penetrated the cist without, however, doing much damage, and comparatively little silt had accumulated. What there was of it lay chiefly in the angles, and it was mixed with pebbles which had fallen in. A careful sifting yielded neither relics nor pottery fragments, but it is not an unusual occurrence for a cist of this period to be entirely barren of grave goods. To sum up, the lower cist is a typical interment of the Early Bronze Age (Childe's Archaeological Stage III),² and the upper two burials may well be assigned to a somewhat later period in that epoch.

The disturbance which caused the broken-down condition of the upper cist with consequent loss of actual dimensions and possibly relics, may be accounted for by the digging of the post-hole which is almost centrally situated on the summit. Whoever dug this hole, whether with the intention of erecting a flag-pole or some other wooden construction of which only the post-hole was found, had partially destroyed the structure either by accident

¹ I have to thank Dr A. C. Stephen of the Royal Scottish Museum for the identification of the shells as "Cellar snails (*Oxychilus cellarius*), all but two of which seem to have some concretion upon them, and are probably therefore as old as the bones. The species is known from Pleistocene levels. The two without concretion are probably recent introductions."

² *Scotland before the Scots*, pp. 7 and 18; pl. vi, fig. 2.

or design, and with more or less reverence had reburied in the lower cist some of the bones that had turned up.

I desire to thank Lieutenant-Colonel and Lady Anne Babington for having kindly permitted me to carry out this excavation, and for having placed at my disposal the assistance of Mr Dodds, the gardener, whose enthusiasm and energy were very greatly appreciated; also Dr W. C. Osman Hill, of Edinburgh University, for the appended report on the skeletal remains, which he was good enough to prepare with great promptitude in order to make possible the speedy re-interment of the bones and the covering-in of the cist.

REPORT ON THE SKELETAL REMAINS.

By Dr W. C. OSMAN HILL.

Three individuals appear to be represented, and these are, for convenience, labelled A, B, and C. A, the principal and probably primary occupant of the cist, is represented by a fairly complete skeleton, though curiously the missing bones all pertain to the left side. B is comprised by a small number of very incomplete bones discovered in the eastern corner of the cist beneath the gap between the cover-stone and the side slabs. C comprises a still smaller collection of very imperfect bones, discovered outside the cist and superficial thereto. Were it not for the presence of the imperfect shafts of a pair of humeri in collection B and of a third humeral shaft in collection C, I should have had no hesitation in declaring B and C the same individual.

SKELETON A.

This is represented by a fairly complete brain-case, but the face is, unfortunately, lacking, having been damaged in excavation. All the upper teeth were recovered, and also a tolerably complete mandible, with its dentition. Other parts include the last 7 thoracic vertebrae, parts of at least 5 others, sacrum, all 12 right ribs, but no left ones, sternum, and the following appendicular bones: lateral end of right clavicle, right scapula, both humeri, radii and ulnae, parts of both innomines, both femora, tibiae, fibulae, calcanea, and tali, together with a right patella, a cuboid, scaphoid, semilunar, pisiform, one manual and one pedal cuneiform, two ossa magna, and a collection of metacarpals and phalanges, mostly from the hand. The bones represent a well-built man of middle age, the stature being computed at 1730 mm. (5 feet 8 inches).

The skull is large, having an estimated cranial capacity of over 1300 c.c.,

and is remarkable for its great relative height (hypsicranial and acrocranial). It falls into the mesaticranial category in regard to its length-breadth ratio, being rather less broad than is often found in crania of this age. But the biparietal diameter is curiously less than the bimastoid dimension, giving the norma occipitalis a peculiar aspect encountered seldom in human, but regularly in anthropoid crania. The outer table has been eroded in places, exposing the diploe, and in some parts complete perforations have been effected; all these are regarded as posthumous products. Superciliary ridges are strongly marked. The sutural arrangement so far as discernible is of the normal human pattern, but the parieto-squamous suture has an atypical form, sloping smoothly upwards from the asterion to a summit more or less in line with the bregma, thence steeply descending in an irregular curve towards the pterion. This is no doubt merely an individual peculiarity. The measurements of the skull and appropriate indices derived therefrom are recorded in Table I.

TABLE I.—CRANIAL MEASUREMENTS.

	mm.		mm.
Maximum cranial length	184	Sagittal arc	360
" " breadth	141	Transverse arc	c. 320
Bimastoid breadth	150	Cranial circumference	c. 530
Least frontal breadth	98	Mandible-symphyseal height	31
Auricular height	128.5	Bigonial	c. 88
Basion-bregmatic height	140	Maximum depth of ramus	30
Foramen magnum length	36	Minimum " "	27
" " breadth	30	Maximum thickness of ramus	20

Indices.

Length-breadth index	77	(mesaticranial).
Length-height index		
(using auricular height)	70	} (hypsicranial).
" (using basion-bregma)	76	
Breadth-height index		
(using auricular height)	91.5	} (acrocranial).
" (using basion-bregma)	100 approx.	

The forehead is high; commencing vertically, it soon curves smoothly backwards, rising more or less uniformly to the vertex, maintaining its height for some distance, then descending in a uniform curve past the lambda, with the result that the occiput forms a fairly vertical though not flattened surface; there is no projection of the occipital pole.

The mandible indicates that the face was relatively broad, but the height is difficult to decide in the absence of any maxillary bones. The chin was moderately developed. The teeth indicates an edge-to-edge bite and show a fair amount of wear, but no evidence of caries or ante-mortem loss of individual teeth. All wisdoms were erupted, but unworn. There is slight malocclusion of the lower incisors.

The spinal bones present little for comment, except the sacrum. This is of the usual male type, but is specially interesting in being composed of six in place of the usual five vertebræ. The additional element is due to "sacralisation" of the last lumbar vertebra, and from the fragment remaining of the last lumbar the union appears to have been fairly complete. The sacral index is calculated to have been approximately 104, placing it in the subplatyhieric category.

The bones of the limbs possess a rugged character and are of robust build, indicative of a muscular physique. This applies especially to the lower limb. Measurements are given in Table II.

TABLE II.—OSTEOMETRY OF LIMB BONES.

	R.	L.
Humerus, maximum length	343	345
Femur: Maximum length	480	482
Physiological length	477	477
Trochanteric height	460	454
Sagittal diameter of upper third	29	29
Transverse " " "	36.5	36.5
Sagittal diameter of middle third	31	27.5
Transverse " " "	29	26.5
(Platymetric) platymetric index	79.5	79.5
Pilastric index	107	107
Tibia: Maximum length	389	394
Sagittal diameter } at level of	36	42
Transverse diameter } nutrient foramen	29.5	29
(Mesocnemic) platycnemic index	76.2	69
Fibula, length	376	373
Talus, length	64	61
" breadth	48	47
Calcaneum, length	95	89
" breadth	46	46
Humero-femoral index	72	
Tibio-femoral index	81	
Maximum height of innominate bone	220	
Interspinous diameter	127	
Intercrestal diameter	145	

These dimensions and proportions correspond well with skeletons of similar age previously examined. Noteworthy are the great broadening of the femoral shaft in its upper third and the high development of the posterior buttress formed by the *linea aspera*. The tibia, especially the left, exhibits a very marked rugose thickening of the oblique popliteal line, suggesting a very great development of the muscles of the calf. The side-to-side flattening so frequently met with in tibiae of this age is not present, but the lower end presents squatting facets.

The scapula and innominate bones conform to the general plan in being large and heavily marked by muscular impressions. The innominate definitely determines the sex. The scapula exhibits a relatively small supraspinous but a roomy infraspinous fossa due to the high position and obliquity of the spinous process. A curious bony outgrowth from the lower part of the vertebral border was probably associated with the insertion of the *rhomboideus major* muscle. The coracoid is comparatively small, but the axillary border is very stout and rugged.

SKELETON B.

The bones are few, fragmentary, and in poor condition. The only parts of the skull recovered are the squame of the occipital bone, a fragment of a parietal, and another, smaller flat bone, probably also from a parietal: there is also the orbital plate of the frontal—a rather curious element to have been preserved in the absence of the remainder of the frontal bone. No trunk-bones are represented, but the following limb-bones are preserved in a rather incomplete condition: shaft of left humerus, both femora and both tibiae; an additional long bone mixed with this skeleton appears to be the shaft of the left humerus of a medium-sized dog. The only long bone sufficiently complete for measurement was the left tibia. This is in two parts, but pieced together they represent a bone of approximately 333 mm. long, which suggests a possible stature of 1590 mm. (5 feet 2 inches). It is not possible to determine satisfactorily either the sex or age of this skeleton, but it is of more delicate build than Skeleton A. It may possibly, therefore, have been female or juvenile.

SKELETON C.

No part of the skull is represented. The remains include eight rib fragments, among which two can be relegated with certainty to the right side and one to the left. In addition, there is an imperfect, detached scapular spine, the shaft of a left humerus, the major part of a right ulna, and a fragment of shaft from another forearm bone. It is impossible to infer much about the possessor of these fragments other than to state that the presence of a humerus precludes the possibility of associating this group with group B. The sex and age cannot be determined from the condition of this material.

III.

A STONE AGE SETTLEMENT AT THE BRAES OF RINYO, ROUSAY, ORKNEY. (SECOND REPORT.) BY PROFESSOR V. G. CHILDE, D.LITT., D.Sc., F.B.A., F.S.A., F.S.A.Scot., AND WALTER G. GRANT OF TRUMLAND, F.S.A.Scot.

Read March 10, 1947.

I. EXCAVATIONS.

The operations of July-August 1946 were concentrated firstly on areas lying immediately north of dwelling A and, like it, nestling at the foot of the little cliff that shelters the settlement on the east and has helped to preserve it. In this direction the operation of the winter 1937-38 had exposed a hearth (F) and the door and bed of a dwelling (G). Then in the same summer part of a hearth (He) had been discovered under the casing wall of A, between A and F, and at the same time a segment presumed to represent the east wall of the assumed dwelling E had been identified. It was hoped by the removal of ruinous structures attributed to F to recover the north wall and other features of E. But these expectations were only partially realised (fig. 1).

In 1938 we had remarked that the 77- and 78-foot contours (plotted by extrapolation) swerved eastward over the area of E, and had treated this as a natural feature in the conformation of the land. It now appears that north of the assumed area of E these contours resume the same north-north-west trend as they exhibited over B and A, and as the 76-foot contour does everywhere. Moreover, the east wall of E turns out to be a mere skin-deep retaining wall; behind the facing course stood a slab on edge, and behind that virgin soil or pure hill-wash sloped up very steeply (Pl. III, 1). Presumably, therefore, the east end of "dwelling E" had been excavated in the subsoil to a depth of at least 2 feet. No continuation of the wall, which had been traced in 1938 to a ragged break, was found. Just where the wall breaks off we found a socket-hole in the subsoil, over 8 inches deep, 10 inches long, and 4 inches wide; it had evidently held a slab or post set transversely to the line of the existing wall segment.

Under the area occupied by Hf a bank of yellow clay, full of fractured bits of rock and rather dirty, but archaeologically sterile, runs east and west over the virgin soil. It is taken to represent the filling of the north wall of dwelling E. On the east this material can scarcely be distinguished from

RINYO, ROUSAY, ORKNEY.

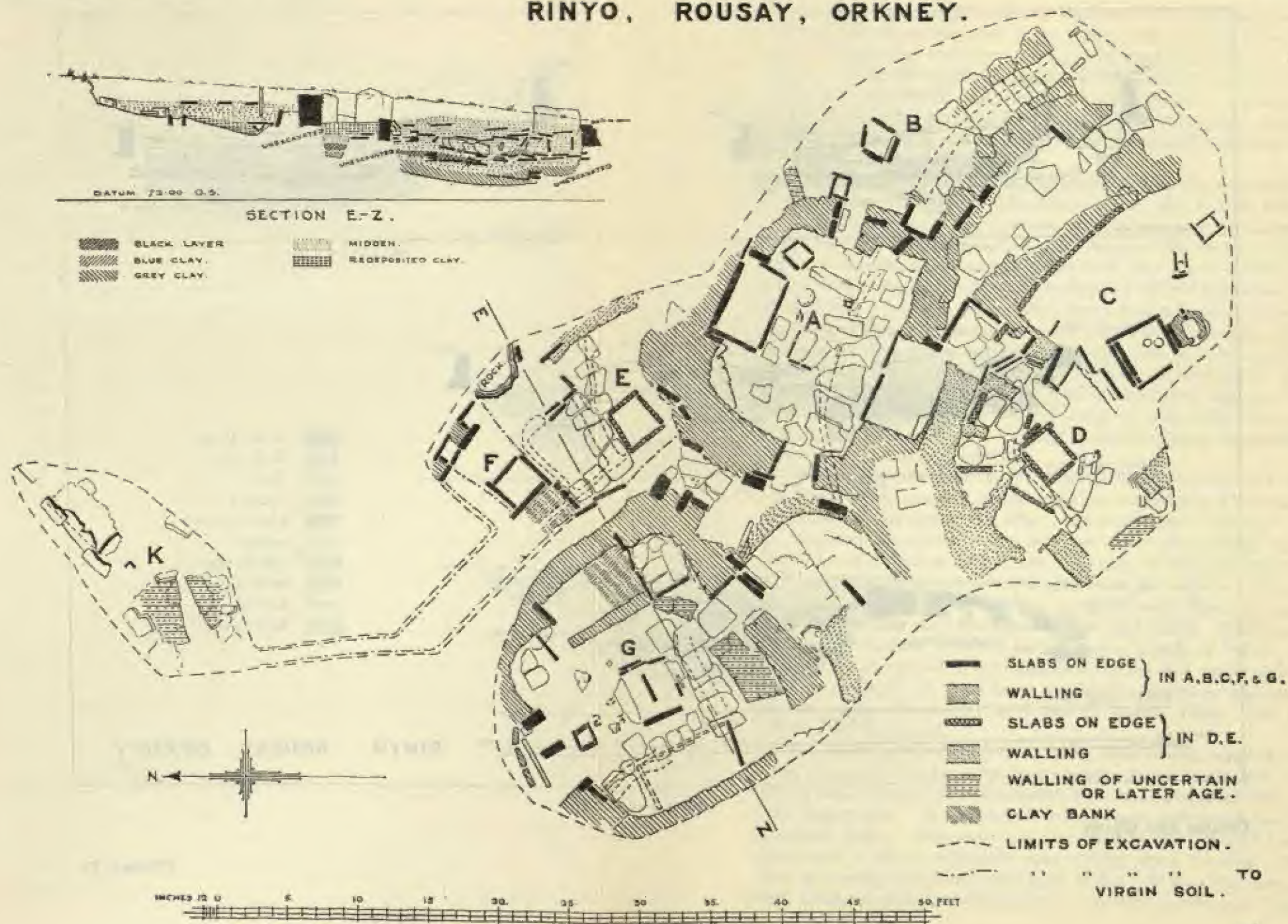


Fig. 1. General Plan of Excavated Areas.

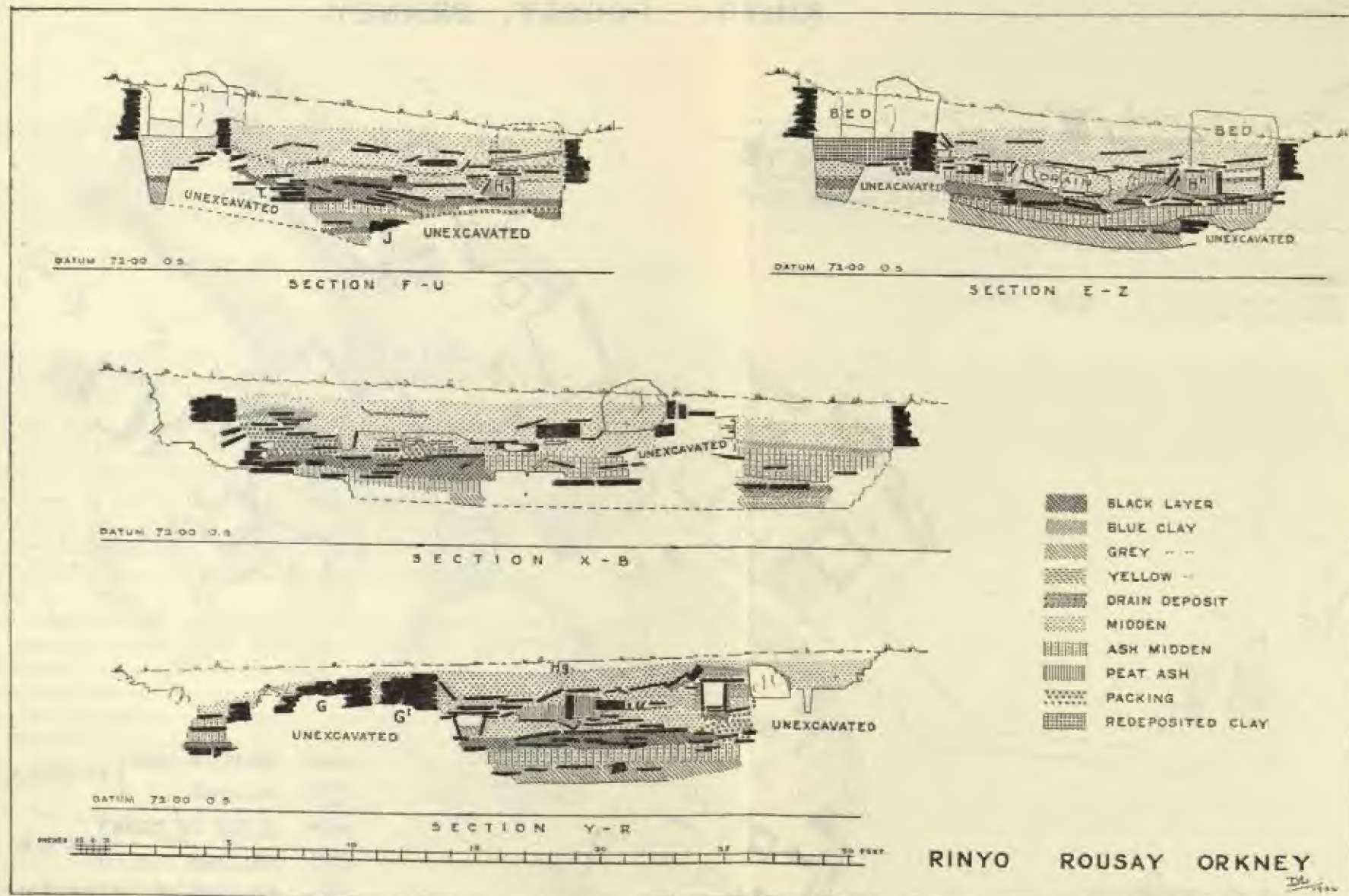


Fig. 2. Sections.

CHILDE AND GRANT.

[To face p. 17.

the steeply sloping virgin soil, but farther west a thin black band, containing small scraps of pottery and bone, defines the frontier between the natural and the laid clay, and there is a bed of fractured slabs at the base of the latter. Along the southern margin of the bank is a rough wall of very small slabs that now forms one side of a drain channel. To the west the bank abuts against the north end of a pair of slabs on edge rising scarcely one foot above the floor of dwelling E, but presumably representing part of its west wall.

The chamber floor consists of virgin soil at the east end and elsewhere of midden, covered with a thin skin of yellow clay or with slate paving-slabs. On it the only surviving articles of furniture are the hearth, He, and a small box, P, to the north-east of the latter. He measures internally about 2 feet 6 inches square and is defined by four stout kerbstones, measuring respectively 2 feet 10 inches \times 12 inches (S.), 2 feet 9 inches \times 1 foot 4 inches (W.), 3 feet \times 1 foot 5 inches (N.), and 2 feet 4 inches \times 9 inches (E.). The east end of the north kerb is sunk 6 inches in virgin soil, and the east kerb and end of the south kerb also descend into it. A supplementary kerb, 1 foot long, strengthens the north kerb at its west end. The hearth was bottomed with a stout slab 2 feet 6 inches by 2 feet, trimmed along the south edge to fit the kerbs but leaving a gap at the north-west corner to communicate with the drain. On it lay 10 inches of peat ash in which three black layers could be seen in section.

The floor immediately north of the hearth is paved with slates for 2 feet, and these slabs, actually covering drains, extend also 3 feet east of the hearth at the north-east corner (Pl. III, 1). Beyond these but only a foot in front of the east wall two slabs project 4 inches above the natural clay floor to form two sides of a shallow box P, the west side of which is extended northward by a third slab that scarcely emerges from the subsoil. The east and north ends are missing. Between the uprights were three layers of horizontal slabs with clean clay between and around them. The uppermost had a maximum width of 1 foot 8 inches and a length of 3 feet; the two lower layers were composed of superimposed halves of a single slab, shown by the impression burnt on it to have previously served as the base for an oven like the slabs discovered in A and C during 1938. The lower half lay directly on virgin soil.

The dwelling floor was traversed by three drains running under the pavement slates (Pl. III, 2). One begins under the east wall, presumably to carry off the water that exudes abundantly from rock-beds and flows down the cliffs after heavy rain. It runs north-west to join, just north-east of the hearth, a second drain. This starts at the shallow box P, and passes along the north side of He to debouche into a third drain running north and south, past and partly under the west kerb of He. It was very neatly constructed with trimmed slates set obliquely to converge and form a V-shaped channel

6 inches deep. It appeared to start under the bank of clay, 6 feet north of the corner of He, emerging from beneath a stout slab at the margin of the bank and eventually flowing out southward in the direction of A. Just after emerging from the bank this drain is joined by another east-west drain which, as already mentioned, flowed along the south margin of the bank at a distinctly higher level than the north-south channel. Its northern margin was a rough two-course wall, while the south side was formed of the usual tilted slates. This drain starts explicitly in an irregular hollow scooped out of the clay just north-west of box P. But a channel, running along the west side of that box from the south, seems to communicate with this depression. It looks, in fact, as if the drains running along the north side of He had become blocked and their contents had been diverted by this circuitous route in the direction of the main north-south channel. For there was a second layer of slates over the pavement east of He but high enough to leave a channel under them.

The floor of F had been disturbed, and its walls are altogether missing save perhaps for some slabs over He. Eight inches above the latter's west kerb is the base of a slab on edge, 16 inches high and 21 inches long. This together with pillar-stones on either side of it may have formed the back to some construction in dwelling F. On its north side a series of stout slabs, at 17-10,¹ extend for 3 feet northward in the direction of Hf. Beneath them are 8 inches of midden packing, then some thin slabs, and then clay to the floor of E at 15-65. But the topmost set of slabs cover a slab on edge that looked as if it ought to belong to the series that runs west of Hf and appears contemporary therewith. The floor of F when uncovered in 1946 was so much disturbed that it was impossible to decide whether the slabs over He and the walls they support belonged to F or to some subsequent construction. A layer of yellow clay that covers the former E area at an average level of 16-40 from the outer wall of G to the rock-face on the east is the foundation rather than the living floor of F, and underlies the hearth and dresser, the only intelligible remnants of the dwelling's former furniture.

Hf, formed of four stout kerbs about 9 inches high, is set on the top of the clay bank mentioned in connection with the north wall of dwelling E. It measured internally 2 feet 8 inches by 2 feet 4 inches and was filled to 17-25 with red ash. It rests on a thick bed of yellow clay above the dirtier clay of the bank and a slate slab to the north. In the clay base we observed an oval depression extending from the centre to the north-east corner, but only 3 inches deep.

Only 3 feet east of this hearth two piers of a dresser rise 1 foot above the clay floor. They are represented by stout slabs on edge that face built walls of the same height projecting 1 foot 2 inches. The back of the recess

¹ The levels in these Reports are referred to an arbitrary datum 65-30 feet above Ordnance Datum.

between these piers is formed by a slab on edge rising to the same height. A second similar slab to the south must have formed the back to the second recess. The southern pier, that should have bounded it, is missing, and may have been partly constituted by a projecting outcrop of bed-rock. Immediately behind the slabs undisturbed soil rises in a steep slope from the floor-level about 17.50 to the top of the rock-shelf at 19.90 in 3 feet behind the back slabs.

Opposite the dresser, and about the same distance west of the hearth, ran a line of slabs on edge. The highest, 3 feet 6 inches long, on its upper edge rises to 18.05, some 15 inches above the clay of the floor. Its base rested on the slabs paving E just above the drain. The next slab to the north disintegrated between 1937 and 1946. In that year we found a third slab, j, in the same line, 2 feet long and 1 foot 6 inches high. Its upper edge at 16.35 seems to limit the clay floor in that direction.

The back of the wall of dwelling G, that is still intact to a level of 17, may have formed the front wall to house F, unless that were earlier than G. Immediately north of Hf, however, begins a ruinous wall, running north-north-west, the base of which is 17.85, well above the floor-level of F. It was faced to the east and has tilted back bodily westward (Pl. IV, 1). It could once have served as a casing wall to G.

Dwelling G.—In 1937–8 the doorway of a dwelling opposite and north of the door of A had been observed, and the south-east corner and right-hand bed of this chamber had been cleared down to the floor-level. The whole area was systematically excavated in August 1946. Although situated under a ploughed field, the complete circuit of the walls was recovered save for a break in the south-west corner. On the west the wall-tops emerge into the tilth and actually show dints from the ploughshare, yet they were found standing to a height of 15 to 18 inches from the floor. The east end, in land not recently cultivated, is in better condition; the walls stand 2 feet to 2 feet 6 inches high and individual uprights still higher. The whole walled area west of the door and bed was filled to the wall-tops with a deposit of reddish soil or midden containing ashes, burnt bones, pottery, and Skail knives, but very few flints. This deposit extended northward even beyond the dresser and the outer face of the wall behind it. Its surface sloped down across the chamber from 16 on the north to 15.5 on the south, and from 16 at the bed-front to 15.25 over the west wall. Against the piers of the dresser and in the recesses between them, as in the north-east corner, were piles of grey clay very tightly packed (fig. 2 XB and YR).

Pots were found standing in the midden at several levels but the succession of "floors" was rather vague. A layer of grey ash poor in relics seemed on the eastern side (that is for the first 6 or 7 feet west of the bed) to separate an upper occupation level (8) from a lower one (7) the surface of which sloped from 15.3 to 15.15. Sherds of four vessels decorated with a

lozenge pattern were found exclusively in the upper deposit. The grey ash, however, hardly constituted a floor. The deposit below it rested on a very irregular and rather discontinuous "pavement" of thin slabs (Pl. IV, 2). Few of these were strictly horizontal; quite a number were found leaning up against original structures rising above the dwelling floor such as the bed-front and the erection termed "wall G'." Between and under such tilted slabs, bones of cattle and sheep and potsherds were preserved. No hearth or other fitment was found upon these slabs, but they completely masked the original furniture of the dwelling. Only on their removal was its original lay-out manifest. It is indeed not unlikely that the alleged pavement is nothing more nor less than the collapsed roof of that dwelling.

Chamber G (fig. 3), in contrast to the prevailing practice at Skara Brae, is entered through its longer side; it is, in fact, broader than it is long! It measures 15 feet from the south wall beside the door to the central pier of the recessed dresser, but 18 feet 3 inches across the beds. The corners of the east wall are as usual rounded. In the north-east corner, though the wall is only 18 inches high, the usual corbelling produces an overhang at the ninth course of no less than 9 inches! The south-west corner has been broken away, but the west wall makes a distinct, if slightly obtuse, angle with the north wall, and is not bonded into it as far as the masonry survives; the junction is plugged with yellow clay (Pl. VII, 2).

The door is set some 18 inches right of centre in the south wall (Pl. V, 1). It was apparently of type i (*Skara Brae*, p. 13), but only the right-hand jamb and cheek are intact. The cheek is faced with a slaty slab that is preserved to a height of only 1 foot 10 inches, but enough to show half the hole for the bar that had been cut through it. A stout slab on edge set athwart the passage opposite in line with the jamb may be taken for a secondary threshold that would correspond with the slab layer (7) over the chamber.

The right-hand bed is recessed into the east wall, 1 foot to 1 foot 6 inches, as in chamber A (Pl. V, 1). Its front is formed, not by a kerb, but by a wall of rather thin slabs, now 6 feet 6 inches long and 10 inches to 15 inches high. The south bedpost or headstone is a fine slab nearly 2 feet 6 inches wide and standing over 3 feet high above the floor. Between it and the upright facing the end of the recess is a gap about 1 foot wide partially closed by a slab on edge scarcely 1 foot high. The north bedpost was found leaning southward against the end of the bed-front with its base 1 foot away or 7 feet 6 inches from its southern counterpart. It is only 2 feet 3 inches high and 2 feet 4 inches wide along its upper edge, which alone impinged against the dwelling wall. Its base is only 1 foot 9 inches wide, so that there was a gap nearly 7 inches wide and 18 inches high between the slab and the wall. This bed was not paved, but its floor seems to have been raised 1 foot above that of the rest of the chamber by a deposit of dirty but archaeologically

sterile clay, very similar in texture to the clay bank north of E and quite possibly an actual continuation of that.

The left-hand bed, 7 feet long and 3 feet 6 inches deep, was built out from the wall and framed with slabs, again as in dwelling A. It had however collapsed, and its fallen walls were completely covered by the slabs of the secondary "pavement." The south headstone, 3 feet 6 inches long and 2 feet 3 inches high, had first fallen out southward and was actually found leaning against the broken end of wall G'. The front kerb, 7 feet long and just over 1 foot high, had then fallen inward over the headstone's base. Finally the north headstone, 3 feet 6 inches long and nowhere over 2 feet high, had fallen inwards covering one end of the kerb (Pl. VI, 1). The floor was probably paved with slabs that had largely disintegrated.

The central hearth (Pl. V, 1) is just over 3 feet wide by 3 feet 6 inches long. Only the east and west kerbs are formed of slabs on edge. That on the west measures 3 feet by 4 inches by $7\frac{1}{2}$ inches high. The eastern one is represented by three sections now no more than 5 inches high. A horizontal slab 1 foot wide and 4 inches thick bounded the hearth on the north. A similar slab took the place of the south kerb for 2 feet 4 inches, but a kerbstone occupied the westmost foot. Outside the east kerb a thin slab on edge rises 11 inches from the clay floor and runs parallel to the original kerb for 18 inches northward from its centre. Just at this point a kerbstone, 2 feet 4 inches long and 14 inches high, is set across the hearth (Pl. V, 2). Presumably these two stones represent a secondary version of the hearth. Actually the deposit of red ash was deeper north of the transverse kerb and spread over the prostrate north kerb of the original hearth as shown in section YR. Yet the slabs of the later "pavement" rested on the edges of the two secondary kerbs.

The dresser must have been recessed into the north wall, but only the three pier ends survive (Pl. V, 2). That on the east projects 4 inches south of the line of the wall and may have fallen forward. The eastern recess is 6 inches narrower than the western. The topmost layer of midden extends right across the dresser's piers, but the clay below is interrupted by a slot, nearly 4 feet long, 4 inches wide, and 9 inches deep, that evidently once contained a back slab to the dresser standing some 2 feet behind the front at the centre pier. Six inches farther north stood two or three courses of the rear wall, faced to the north only.

Between the hearth and the dresser is a box, framed by four slate slabs. The box, not strictly rectangular but rather diamond-shaped, is in all 1 foot 2 inches deep, but there was a false bottom about 11 inches below the rim. The east and west sides were formed of two slabs the inner of which rested on the false bottom, while the outer, like the north and west walls, went down the full 1 foot 2 inches. In the middle of the upper edge of the north side a semicircular notch about 1 inch across and $\frac{1}{2}$ inch deep

had been chipped. The box was luted all round outside with a $\frac{1}{2}$ -inch layer of yellow clay right down to the slate that forms the floor. The bottom was formed of a stout slaty slab, found cracked but originally measuring just over 2 feet square, its corners having been carefully rounded. In it is a shallow depression 1 foot 3 inches by 1 foot 6 inches like the oven bases

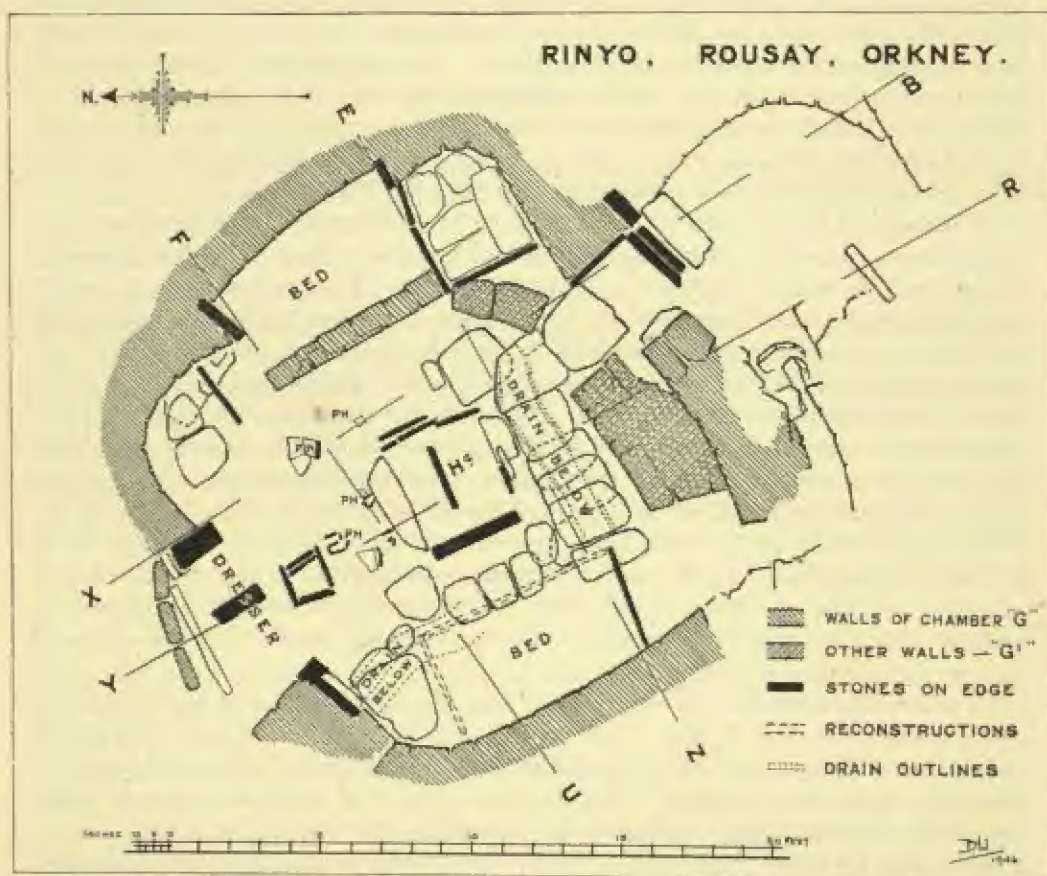


Fig. 3. Dwelling G—Deposit 6.

found in A and C but diamond-shaped like the box. The box was found covered by a large slate extending up to the dresser base and supporting the layers of blue and white clay attributed to the secondary occupation. Whether or no this slab itself be an original lid, the top of the box, rising to 15.40 above datum, must have emerged well above the original floor of G, here between 15.0 and 14.85 above datum.

West of it for about 2 feet were several layers of hard yellow clay within

which was a bed $\frac{1}{2}$ inch thick baked bright red at 14.20 but dipping to 13.90 at foot of dresser. It probably marked the site of a clay oven, but whether this belonged to G, to the earlier habitations represented by Hi nearby, or to the secondary occupation of the chamber could not be determined owing to the shallowness of the total deposit here.

An abnormal feature in chamber G is the construction termed wall G' interposed between the hearth and the south wall of the dwelling (Pl. V, 1). It has the appearance of a built wall extending 5 feet westward from a point 3 feet in front of the left-hand corner of the entrance. Here it stands 18 inches or three courses high, and is concave to the north like the dwelling wall proper. The west end is a ragged break, but opposite the doorway it ends in a straight face two courses deep, but after a gap of 2 feet its line is resumed by two foundation-stones extending to the south corner of the right-hand bed. The base of this wall is about 4 inches lower than that of the south wall of the dwelling and it is over 2 feet thick. There is a gap between it and the dwelling wall of nearly 10 inches opposite the west cheek of the door, but about 2 feet to the west the back slabs of G' abut against the face of the G wall and continue so till G' breaks off, though the two walls are nowhere bonded into one another as far as can be seen now. The reddish midden deposit filling the chamber was not observed over the top of wall G', which rises into the recent humus, but filled the gaps between it and the dwelling wall near the doorway. The slabs of the secondary floor (7) were found leaning against it and completely covering its southern extension. Hence it existed when this "pavement" was laid down and the secondary deposits formed in the chamber area. The paving-slabs and lintels over the south drain do not run under it, and the yellow clay that forms the dwelling floor elsewhere extends only 1 inch under its face. It thus looks as if wall G' existed when dwelling G was laid out. It gives the impression of the remnant of the wall enclosing an earlier dwelling that had been deliberately left in place when G was built, perhaps to serve as a bench. But it is hard to see how the good inner face of the latter wall could have been built up hard against the back of a pre-existing wall. Yet we shall see later that the back of the south wall of G itself is built hard against the face of an earlier wall.

The floor of dwelling G sloped down appreciably to the south-west. In the north-east and north-west corners it is defined by slates at 14.80 above our datum and in the south-east corner at 14.65. But the floor under the left-hand bed seems to be as low as 14.25-14.40, though here the decay of the collapsed bedposts and other slabs makes its precise definition difficult. Between the right-hand bed and the hearth the floor is formed of a thin layer of yellow clay that extends also north of the hearth towards the dresser and about a foot westward in front of the left-hand bed. In it, north-west of the hearth, is a triangular group of three post-holes, that at

the apex being 8 inches square and 8 inches deep, the others only 2 to 4 inches across and framed with small stones set edgewise. Another triangular group of small post-holes, similarly formed, lay north of the hearth. One of the stones framing the central socket in the latter group has been artificially grooved on the face used to hold the post.

The clay floor is far from even. Just in front of the right-hand bed near its north end there was a bowl-shaped hollow, 2 feet long and 1 foot 6 inches wide and about 3 inches deep at its centre. There is another north-west of the hearth nearly 6 inches deep. Over this we found a flat, water-worn stone, some 18 inches square and $4\frac{1}{2}$ inches thick, resting on midden above the clay floor (Pl. V, 1). It would have served well for a seat by the fireside, but also helped to fill up the depression. The latter depression was found to occupy the line of a drain; the other was found to occupy a space between the stumps of earlier walls, masked by the clay floor.

The south-east corner is paved with several layers of slaty slabs the lowest of which run under the dwellings' wall. It is bounded by a shallow slab on edge in line with the bed-front. The north-west corner was also entirely paved with large slates. On these lay a large water-worn boulder, and beside it a freestone block rubbed smooth and slightly concave on one face. The slabs were found to cover a V-shaped drainage channel bordered by slates as under E (Pl. VII, 2). But here there are on each side two slates set so that the lower edges of all converge on the same line, but while there is barely a foot between the upper edges of the inner slabs in each pair, those of the outer ones are nearly 2 feet apart. The space between the slates was filled with a greenish material, almost certainly dung, which exuded from under the north wall and has stained the clay floor of the older dwelling, I, below. But the channel did not run out under the north wall, its end there being marked by a slate set on edge but sloping inward, between the last drain slates and the wall base. The channel was traced from here for nearly 5 feet in the direction of Hg, within which distance its bottom sloped down from 14.00 to 13.50. As will subsequently appear, the drain channel has cut into an earlier hearth, Hi, and disturbed its ash contents. The hollow in the clay floor north-west of Hg may be attributed to the decay of the drain lintels. The channel could not be traced further south. But from the front of the left-hand bed to within a foot of Hg there lay a series of paving-slates connecting with those that lintel the south drain to be described below. Though no built channel was found beneath these, they did not fit firmly on to the underlying clay but covered a loose deposit of greasy earth.

The whole area between Hg and the base of wall G' and up to the left-hand bed was paved with heavy overlapping slabs, not covered by the yellow clay of the floor (Pl. VI, 1). The uppermost slabs covered and overlapped others. The whole complex roofed a channel, 16 inches wide at the top and



1. Rinyo E: Hearth and drains, looking south.



2. Rinyo E: Hearth and drains (uncovered), looking west.



1. Binyo F: Slab, hearth, dresser, and secondary wall.



2. Binyo G: Secondary "pavement."



1. Rinyo G: Right-hand bed, hearth, and doorway.



2. Rinyo G: Hearth, dresser, and "limpet box."



1. Rinyo G: Hearth, left-hand bed, and drain lintels.



2. Rinyo G: Hearth, drain (uncovered), and Hh.



1. Rinyo G: Hh and north drain.



2. Rinyo G: Hh, Hi, and north drain (uncovered).



Hh

Hh

1. Rinyo G: "Pavement" under Hh.



2. Rinyo G: "Pavement" under Hi.



1. Rinyo G: Walls J and T after removal of "pavement."



2. Rinyo G: Wall J and overlying strata.



Rinyo: Fragments of Pottery, and broken Mace-head. (1.)

9 inches deep, running from east to west downwards (Pl. VI, 2). It started about 6 inches east of the gap in wall G' and ran for 5 feet 6 inches west, its clay floor dropping from 14.80 to 14.00. Its end is a wall of three tiny slabs, $5\frac{1}{2}$ inches deep (almost in line with the older wall T below it). The south wall is rather vague till after 6 inches west a tilted slab, transverse to its line, might mark the end of a branch channel under G' which, however, could not be detected farther south. Thereafter the south wall is formed of three neatly trimmed rectangular slates, 9 inches high and set overlapping. There is a possible inlet from the south-east corner of Hg through the north wall which is composed of three slates, like its counterpart. The channel was lined with yellow clay laid over a bottom of slates till it ended in a sloping layer of grey clay. It led into an early hearth, Hh, the east kerb of which had apparently been cut through to make a channel for it, while the north kerb's end is in contact with the channel walls. No discharge for drainage carried by the channel was found from the hearth unless it were along the "pavement," layer 4, beneath it. But the channel contained only loose silt and gave no signs of exposure to heat on its walls or lintels. It is therefore more likely to be a drain than a flue. Perhaps, as suggested below, the discharge from this channel and that from the north drain were really allowed to seep down to the pavement-level and flow away between the loose slabs that composed its upper layer.

Deposits under the Floor of G.

Deposit 5.—Under the floor of dwelling G we encountered at least five earlier deposits. To Deposit 5 belong the two hearths into which the north and south drains led (fig. 4). The south drain debouched directly into hearth Hh. It is as usual framed by four kerbstones; all are 8 to 9 inches high, the southern is 38 inches long, the western 30 inches, the northern 36 inches, but of the eastern only the southernmost 12 inches survive, the rest having been cut away to make the channel for the south drain of G (Pl. VI, 2). The top of Hh lies at 14 feet above our datum, vertically under the corner of the left-hand bed of G and covered by the slabs of its pavement. A slab that runs under the broken end of wall G' overlaps the south kerb. So the hearth is older than both G and G'. A triangular notch, 5 inches deep, has been cut about midway along the inner face of the north kerb, and a similar, but rather shallow, notch was cut opposite to it in the south kerb (Pl. VII, 2). The notches were apparently designed to accommodate two triangular slabs which were actually found set across the hearth, the edge of one rising fully 4 inches above the top of the adjacent kerb, though neither reach the base of the hearth (Pl. VII, 1). West of this division the hearth was found filled with peat ash, bright red on top and black at the base, 10 inches deep and going down to the black layer termed Deposit 4. East of the partition the uppermost layer

of red ash extended almost to the east kerb, but was only 4 inches deep. The remaining 6 inches were taken up by a bank of bluish clay in which the lower edges of the partition slabs were embedded.

Hh may be regarded as the central hearth of a ruined dwelling, H. In any case the hearth is surrounded by a yellow clay floor. Immediately

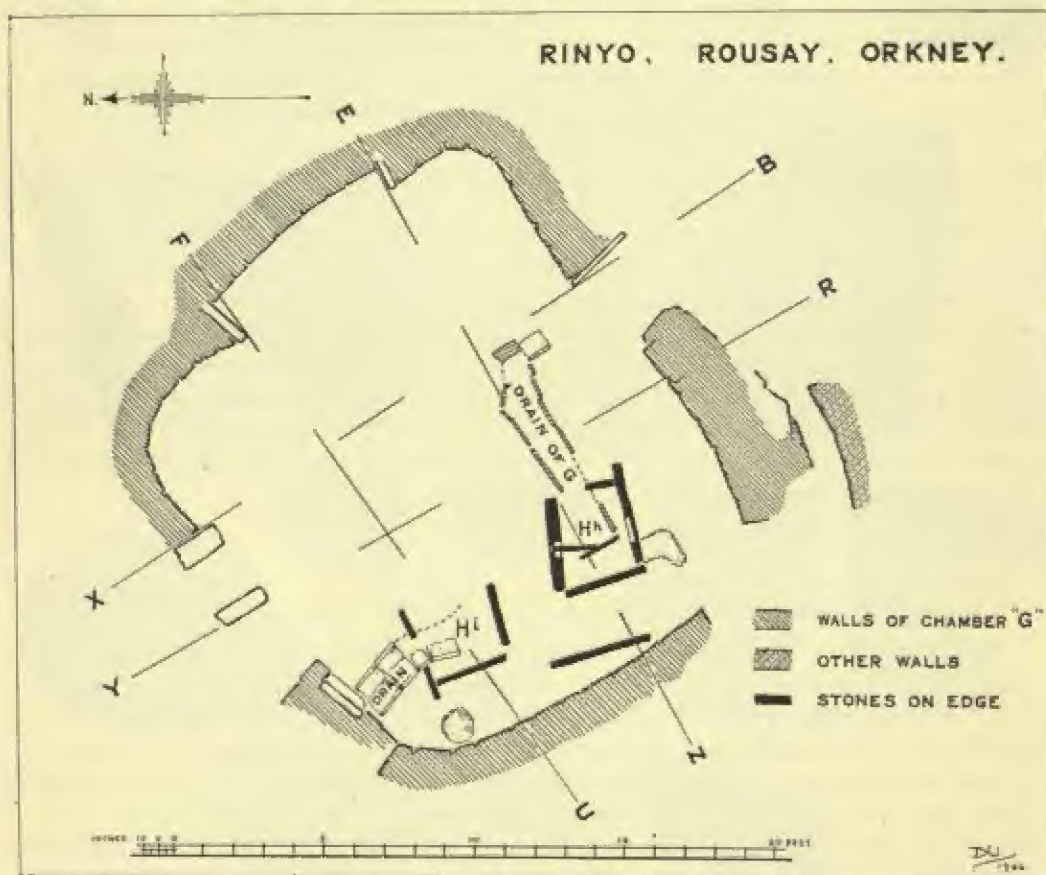


Fig. 4. G Area—Deposit 5.

south of the hearth there is an irregular depression lined with the same clay but only 3 to 4 inches deep. Just under 2 feet west of the hearth a slab on edge, 3 feet 6 inches long and 1 foot high, rises 8 inches above the clay floor (Pl. VII, 2). The line is continued for 6 inches by a smaller slate slab on edge. Both might represent the front of a bed. Finally, just 7 feet south-west of Hg we exposed a segment of inner wall face, 3 feet 9 inches behind the face of G's south wall but approximately parallel thereto with its base at 14-05. It was intact for only 4 feet. Its western end has been disturbed by the

plough, but gives hints of a return that might represent one cheek of a doorway. At the opposite end there is another stone projecting inwards from the line of the face.

Less than 2 feet north of Hh and at almost the same level lay the other hearth, Hi. Its west kerb is 2 feet 6 inches long and 10 inches high. The south kerb, 6.5 inches high, has been broken off 2 feet from its junction with the western. The east kerb is missing altogether. The north kerb is represented by two fragments with a gap of 12 inches between them, but if completed would have been 2 feet 6 inches long. The gap in the north kerb and the truncation of the southern one are undoubtedly due to the north drain of G. Its channel cuts right through the red ash filling Hi, the last surviving slate of its south-west wall actually resting against the sloping face of the ash (Pl. VII, 2). The top of the ash in Hi rises to 13.80 above our datum.

This hearth is embedded in a yellow clay floor, laid down before the present west kerb was put in position, which slopes up from 13.90 west of the hearth to 14.10 under the north wall of G. To the north the surface of the clay is stained green by the dung from the drain, and farther east it is cut through by that channel. In this floor, just north-west of Hi, there is a round bowl-shaped depression, 1 foot across and just 7 inches deep at its centre and lined with yellow clay. From its position and level the wall G' might have framed a chamber in which Hi was the central hearth, but no further indications of the former existence of such a chamber, I, were detected within the area of G.

East of the area disturbed by the north drain we found, under the hearth and floor of G, slabs supporting an occupation deposit that might be associated with H or I or with any earlier deposit subsequent to 4. Right under Hg, but separated therefrom by a slab and clay layer, was a thin patch of red ash about 2 feet across. Near its northern margin was a shallow depression formed by slates tilted down so that their lower ends converged to form a sort of inverted pyramid. Farther east and north the floor of G rested on stumps of collapsed walls. The surviving slabs are in hopeless disorder, as if the later builders had torn out the better stones for use in their own work. So it is impossible to say whether these stumps once formed part of the walls encircling chambers H, I, or even E. In the north-east corner of G they rest on, or interlock with, the debris of a substantially earlier wall, T, described on p. 28, on the stump of which the north wall of G and the east pier of its dresser rest almost directly. Farther west, the rest of the dresser, part of the limpet box and even the north half of Hi, rest on the debris of another early wall, J, the collapsed face of which mingles inconveniently with the ruins of T. In fact under the north end of G we found only wall debris and the unstratified packing that the walls had once sustained.

But south of the sloping edge of this tough packing the stumps of walls, trending east to west at an angle with the line of T, are embedded in and rest on a reddish ashy midden deposit nearly a foot deep below the floor of G—from 14.24 to 13.30 under G' at the south-west corner of the bed and under the banked clay inside the bed from 14.40 to 13.40. At its base three complete pot-bases were found. A similar midden deposit lay under the pavement at 15.40 immediately outside the door of G. Here the whole deposit was 18 inches deep, but the ash layers were interrupted by a band of paler ash mixed with more clay from 14.40 to 14.20, which corresponds roughly to the foundations of walls G and H. Below this band the ash went on down to a darker occupation deposit between 13.70 and 13.45, from which large fragments of several pots, two clay balls, and several fine flint implements were obtained. This deposit may be bracketed with that near the south end of the right-hand bed in G as 5a. It would seem to be older than H as well as G, since the base of the wall attributed to H lies upon it, but is later than 4, which is found below it and separated from it by another band of reddish ash $11\frac{1}{2}$ inches thick.

Deposit 4.—The slabs first exposed at the base of Hh proved to belong to a crazy pavement that extended over the greater part of the area, later occupied by G, and beyond it to the south in the direction of D. This pavement consists of at least two layers of slabs, overlapping like drain lintels. The slabs of the upper layer do not rest tightly on those below them nor fit together very accurately, so that yawning gaps appear between them. The pavement was covered with an intensely black greasy deposit which fills up the gaps between the slabs and shows up as a black band in the walls of the excavation where the slabs have been pulled out. It constitutes Deposit 4. In the south-west corner lumps of peat were lying on the pavement included in the black layer. The overlying deposits of ash and wall stumps below the clay floors of G, H, and I had been fairly porous. The basal slabs of the pavement fit rather closely, and rest on a thin skin of clay that seals the red ash of Deposit 3 below. It looks as if the discharge of drains had been allowed to seep down to the pavement-level and flow away over it to the south.

The pavement begins somewhere west of G, emerging from beneath its west wall about 13.00 above our datum between Hh and Hi (Pl. VIII, 1). To the south we found it again with the appropriate black deposit outside the door of G at 12.85. Within the area of G, south of the middle of Hi, the pavement slopes up for 8 to 10 feet to a wall, T, running within the chamber north and south (fig. 5). This wall first appears, some 18 inches south of the east pier of the dresser, as a mere stump two or three courses high, with a level top at 13.60 which the black deposit and upper pavement slabs override. Six feet farther south it breaks off altogether. But after a gap of 3 feet, its line is resumed under G' and could be traced under the entrance passage, but with

its top here only 12.9 above datum. It was not picked up outside the door of G, probably because an eastward trend, already noticeable within the entrance, brought it outside the area accessible to excavation. Northward wall T continues but in much better preservation, so that, under the north wall of dwelling G, its top reaches 14.20 and actually supports the later wall.

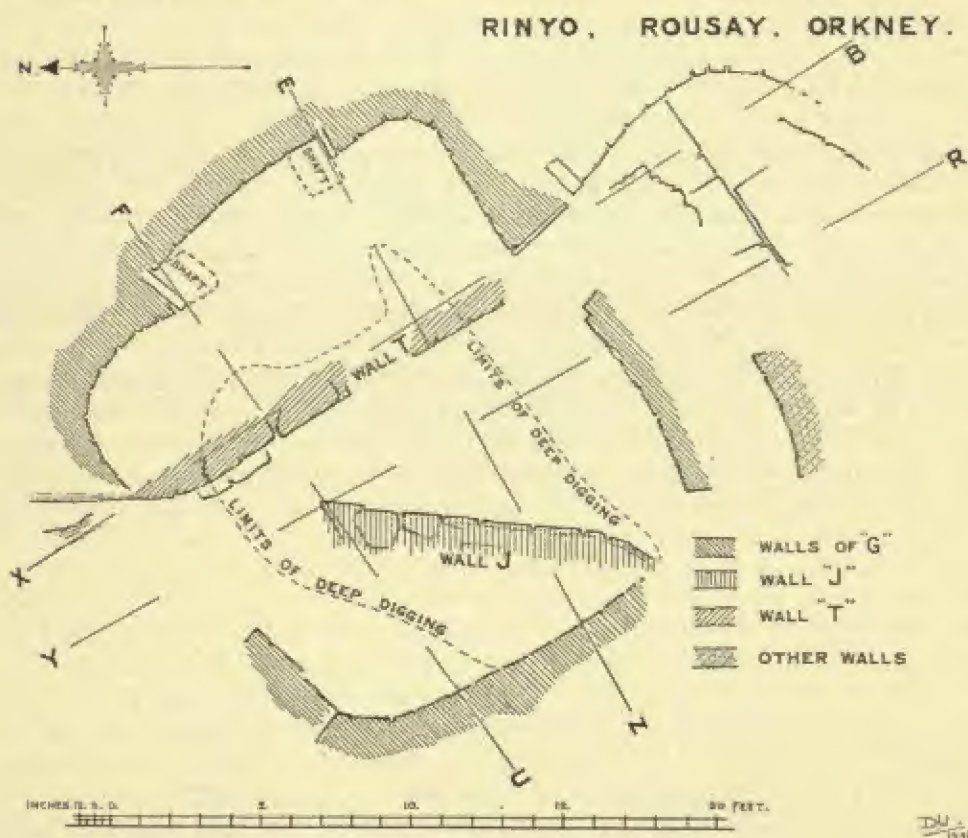


Fig. 5. G Area: Structures below Deposit 5.

Here it is built with a heavy batter facing west-north-west and is beginning to curve away eastward (Pl. IX, 1).

Wall T supports in the north a core of slabs and clay-and-midden packing on which the walls and floors in the north-east corner of G rests. Stones from its upper courses seem to have slipped forward over its stump to rest on the black layer at its base. They are perhaps hopelessly entangled with the similar debris from wall J that runs from the south-west corner of dwelling G obliquely towards wall T, so that it would have met it just where

it begins to turn east. But, significantly enough, wall J breaks off before reaching wall T and; still more significantly, the pavement that generally overlies it itself fades out under the northern end of chamber G from about the centre of hearth Hi and so opposite the better preserved sections of wall T.

South of this sector the pavement of 4 ran up to the face of wall T, and its top layer actually continued over its stump for a couple of feet, up to the level of the front of the right-hand bed in G. But 2 feet 6 inches to 2 feet 9 inches before reaching T there is a partial interruption in its continuity (Pl. VIII, 2). The straight edges of three adjacent slabs at 13.25 to 13.45 all end along a line 5 feet long parallel to the "face" of T, that is resumed after a gap under the line of the south drain. This line looked like a wall edge, and for a foot or so actually did form a face two courses deep. But beneath it other slabs, overlapped by the three aligned ones, projected east of the line coming right up to the face of T at 13.05-13.10, and slabs from the higher pavement layer also projected beyond it. Though these looked like lintels they never actually reached, still less rested on, the stump of T. The black layer continued right up to the face of T, being 8 inches deep and rather looser in texture between it and the superficial break. Indeed this deposit continues across the line of T right up to the east wall of chamber G behind the bed, but it slopes up and grows thinner but rather tougher and more clay-like; in the north-east corner of the bed it is only 2 inches thick, lying between 13.65 and 13.85 above our datum. Probably it ran on under the wall to the foot of the steep rock-slope under the F area. For here we found a similar black band at about 14.90 to 15.00 above datum, on a level with the west drain under chamber E. But east of the line of T the black layer is tougher and poorer in sherds than under G among the paving-slabs.

Wall T looks like the casing wall of a chamber lying east of G. But there is clearly no room for a dwelling between it and the natural cliff behind E and F. Actually a wide trench dug to virgin soil outside G, but parallel to and only 8 to 10 feet east of T, disclosed no inner wall faces, articles of furniture, or deposit suggestive of such a dwelling, but only virgin soil at a higher level than the top of T. The packing T supported might then have constituted a platform, but it is uncertain what, if anything, stood thereon. The wall is presumably not only older than G but also than the midden deposits, termed 5a, that occur above its stumps. If chamber F were older than G and also than Deposit 5a, it could conveniently have been accommodated on a platform thus supported. No relics indicative of relative date were associated with the ruinous remains of F, but it would be surprising if so superficial a structure had been really very ancient. On the other hand it is possible that the pavement under G and to the south thereof is no older than wall T but actually composed of stones removed from its face. The basal paving-slabs, often over 3 inches thick, more than

2 feet 6 inches long and 2 feet wide, would make good building stones. The absence of the paving where wall T stands to a relatively high level, under the north end of G, would be explicable on this assumption. It is none the less certain that the slabs had been deliberately laid out and that the pavement thus formed is substantially older than the overlying deposits and structures in the G area.

Deposit 3.—The basal slabs of the pavement just described in the south and west part of the G area rest tightly on a thin skin of pale clay that seals a deep layer of unusually bright red peat ash. This extends from the south-west corner to the line of the front of the right-hand bed eastward, and northward to the middle of hearth Hi. Farther north it seems to fade out in the midden packing under the north-west corner of G, but along line FU the red ash extends at least to the base of wall T and under slabs on which the foundation of this rests, at least up to the point where the north wall of G crosses it. Behind wall T only 4 inches of clay and ash, much less red than the typical ash of Deposit 3, intervene between the black layer (4) and the grey clay bed equivalent to (2). But farther south, where the line of wall T is broken away, a layer of red ash extends right up to the front of the bed between 12.95 and 12.30, though it is thinning out in this direction and is again more mixed with clay and small stones. At the base of the east wall of G, in the bed and outside the door, this red-ash layer is missing altogether, and the pavement of 4 rests directly on grey clay identical in texture with that underlying layer 3 elsewhere.

As found typically between the west wall of G and wall T, layer 3 seems to consist mainly of peat ash. It was very soft and wet, of the consistency of Orkney cheese. It was everywhere full of bones and bits of pottery, but these had been reduced to the same consistency. Under the west wall of G and Hh the deposit was about 8 inches deep, not counting 2 inches of more clayey material sealing it. In general, layer 3 contracts to the west; it is only 5 inches thick on the line of wall T at the point where this breaks off, and northward along the same line it has shrunk to barely 4 inches below the north wall of G at the base of the upstanding section of wall T. Here too it was tougher and mixed with more stones, partly perhaps because no longer separated from the overlying deposits by a continuous bed of slabs. But even here it retained its distinctive red colour and contained plenty of sherds and bones, as usual terribly disintegrated.

Deposits 2 and 1.—Under the south-west corner of dwelling G and under Hh the top of a wall, J, emerges into the red layer. This wall curves in from the south-west as far as Hh and then, when only some 3 feet from the line of G's west wall, begins to run fairly straight north-east till it is 7 feet 6 inches from that line and only 3 feet from the base of wall T. Here it breaks off (Pl. IX, 2). Wall J is nowhere more than three courses high, but is certainly faced to the south-east and south with an already appreciable

batter. Behind the line of face a tough packing of clay, stones, and midden looks like a wall-core. So J looks like the outer wall of a chamber assumed to lie to the west of G.

In front of the face there is a sort of paving of rather thin slaty slabs on which the foundation course rests. On this, against the face, there is a grey deposit of clay mixed with many fragments of rock and some ash, and all extremely tough. A similar deposit extends below the paving and underlies the red layer where wall J breaks off, and immediately underlies the black layer where the red is missing. It is generally almost sterile, but in front of wall J looks like a genuine occupation deposit containing plenty of sherds and bones and at least two Skaill knives—Deposit 2. Deeper down it passes almost insensibly into the yellow subsoil, but sometimes, right on the latter's surface, there is a thin band containing rather more but always minute fragments of bone and pottery. This rather questionable Deposit 1 may represent an old ground surface.

The subsoil slopes up steadily all over the area of G. Under the south-west corner living rock was exposed at 11.20 above our datum. Farther north along EZ the subsoil rises from the same level at the base of wall J to 11.80 in some 8 feet and then to 12.80 under the bed in the next 5 feet. There is presumably a ledge of rock under the front wall of the right-hand bed, and very likely another step under the east wall of G, since the next recorded reading, some 6 feet farther east under the E area, was 14.80. Similarly still farther north we reached subsoil at 11.25 on line FU between walls J and T, at 12.25 behind wall T in line with the bed's front wall, and again at 12.80 in the north-east corner of the bed at the base of G's east wall. Once more it has reached 14.00 just outside the G area only 4 feet farther east.

The K Area.

A test trench, 4 feet wide at base, was dug to virgin soil for a distance of 16 feet from the north-west corner of Hf, parallel to the wall of G. Traversing a comparatively level strip at the foot of the steep slope from the east, it revealed no regular occupation deposit nor any architectural remains save two adjacent slabs on edge standing quite isolated. The trench cut through a very poor midden deposit over 2 feet deep. This was interrupted by a distinct, but very narrow, black band at about 15.50, some 6 to 10 inches above virgin soil. It may be equated with layer 4 in the G area, but yielded no characteristic relics.

From the end of the south-north trench, which must have only just missed the back of wall T, a narrower oblique trench was driven uphill in a north-easterly direction towards some slabs on edge that had been noticed protruding through the turf. Along this line that is oblique to the contours, the turf surface rose from 17.50 to 20.50 in the first 15 feet and

then levelled out for a space, while subsoil rose from 14·50 to 17·15 in about 8 feet. A bed of grey stony ash rose from 16 feet to 19·20 in the 15 feet. In this bed was intercalated the black band already noted for the first 6 feet only rising from 15·50 to 16·50, but it petered out at the latter level. Above the grey bed the humus covered a layer of reddish-brown ash midden, 8 to 12 inches thick.

At the top of the slope we encountered a bank of building slabs in great disorder, but probably the ruins of a wall. Beyond this the turf surface is more nearly level for a few yards up to the main line of cliffs, but has obviously been disturbed by quarrying in these cliffs. Actually at the top of the slope there is now an area at least 10 feet wide over which the subsoil is almost level at 18·90. It is on this shelf that the ruined wall and the slabs on edge actually stand.

On deturfing, the ruined wall proved to be hopelessly disturbed—posts have recently been driven in along its line—save for a slab on edge, D, near its northern end. But the slabs on edge proved to make a pattern reminiscent of a typical Skara Brae bed. A stout slab on end, A, 2 feet wide north-south, rises 2 feet above the soil, just like the headstone in a normal bed. Against its northern edge is leaning a thinner slab running east and west, 4 feet long and 1 foot 8 inches high, with two smaller slabs leaning against its end; would do well for a front kerb. But no east "headstone" survives, and there is no trace of a wall at the southern end of the extant "headstone" to mark the back of the hypothetical bed. A couple of feet north of the supposed kerb a stout slab, 18 inches long, leaning the opposite way might have been connected with a hearth, but no red peat ash appeared behind it. Three feet west of the bed a slab, D, 18 inches long and 22 inches high, is leaning against the bank of stones, assumed to represent the ruin of a wall; its base is nearly parallel to, but about 9 inches north of, the apparent line of the "bed's" front "kerb." It might once have formed the cheek to a doorway (fig. 1).

The kerb and headstone of the bed supported a small platform 2 feet wide, paved with small chips of stone set in a thin bed of clay, and this underlying clay extended for a further 3 feet south to the edge of our excavation at the same level. On it, just under the turf, was a thin layer of ash from which sherds of at least two thin-walled pots were recovered. Under the clay was another, greyer layer of ash that thinned out towards the east where the ground rises again. North of the bed kerb the clay bed of the platform and the superficial ash layer were both absent. The turf covered a tough but sterile bed of chips of rock and yellowish clay, apparently washed in, under which, however, there was a thin bed of greyish ashy material as under the platform to the south. It was from this that we recovered the half of a broken granite macehead, battered as if used secondarily as a hammer-stone. West of the headstone of the "bed," the clay

layer defining the platform was missing, but there was a single deposit of reddish-brown midden, 9 to 12 inches deep, right up to and beyond the ruined wall, and in fact continuous with that noticed on the slope in the connecting trench. This deposit contained many sherds, flints, and fragments of decayed bone.

Many sherds from the K area, especially those from the "platform," belonged to relatively hard, thin-walled vessels. But coarse, thick fragments of standard Skara Brae ware occur here too, and include part of a vessel decorated with a single applied rib below the rim, but no more elaborately ornamented sherds. In addition to sherds several amorphous lumps of baked clay, reminiscent of fragments of moulds, were recovered, and a number of flint scrapers.

II. RELICS.

Pottery.

The stratified deposits in the G area yielded an instructive series of sherds, though all in very poor condition. The secondary layers, 7 and 8, contained remains of some fifty distinct vessels. Of these, eight or nine were made of relatively hard ware, 9 to 14 mm. thick, black externally and sometimes on the inside too, but still tempered with the coarse angular grits characteristic of Skara Brae fabrics. None of these is decorated, but some show a stepped bevel inside the rim (fig. 6, 1, 2). The remaining forty odd vessels are made of the familiar very coarse, soft fabric, tempered with large angular chunks of local rock; indeed a slice of a Skaill knife, 2½ inches long, was incorporated in one sherd (fig. 6, 4, and Pl. X, 5). The walls are generally over 15 mm. thick; the surface is fired brick-red. The roughness of the surface, due to the projection of the rock fragments, is only partially obscured by the application of a thick slip. All the vases are ring built. The bases are flat, most rims internally bevelled, usually with a step or ledge just under the rim inside. At least thirty were decorated with applied ribs, held in place by the slip (fig. 6, 7). In addition to simple horizontal ribs, lozenges adorned four pots all from the latest level, 8 (Pl. X, 3); simple chevrons or wavy lines between the ribs, two, and combined with vertical lines, one (vol. lxxiii, Pl. XIX, 2); oblique ribs, joining two horizontal ones, distinguished four vessels, at least two from layer 8. Two pots from layer 7 were adorned with internal ribs on the base. One base of technically similar ware but undecorated, and found probably in layer 5 (fig. 6, 5), shows outside the impressions (Pl. X, 9) from the mat on which the vessel had stood while being built up; in some ten cases the rims were decoratively scalloped (Pl. X, 1).

Comparatively little pottery was actually lying on the original floor of G,

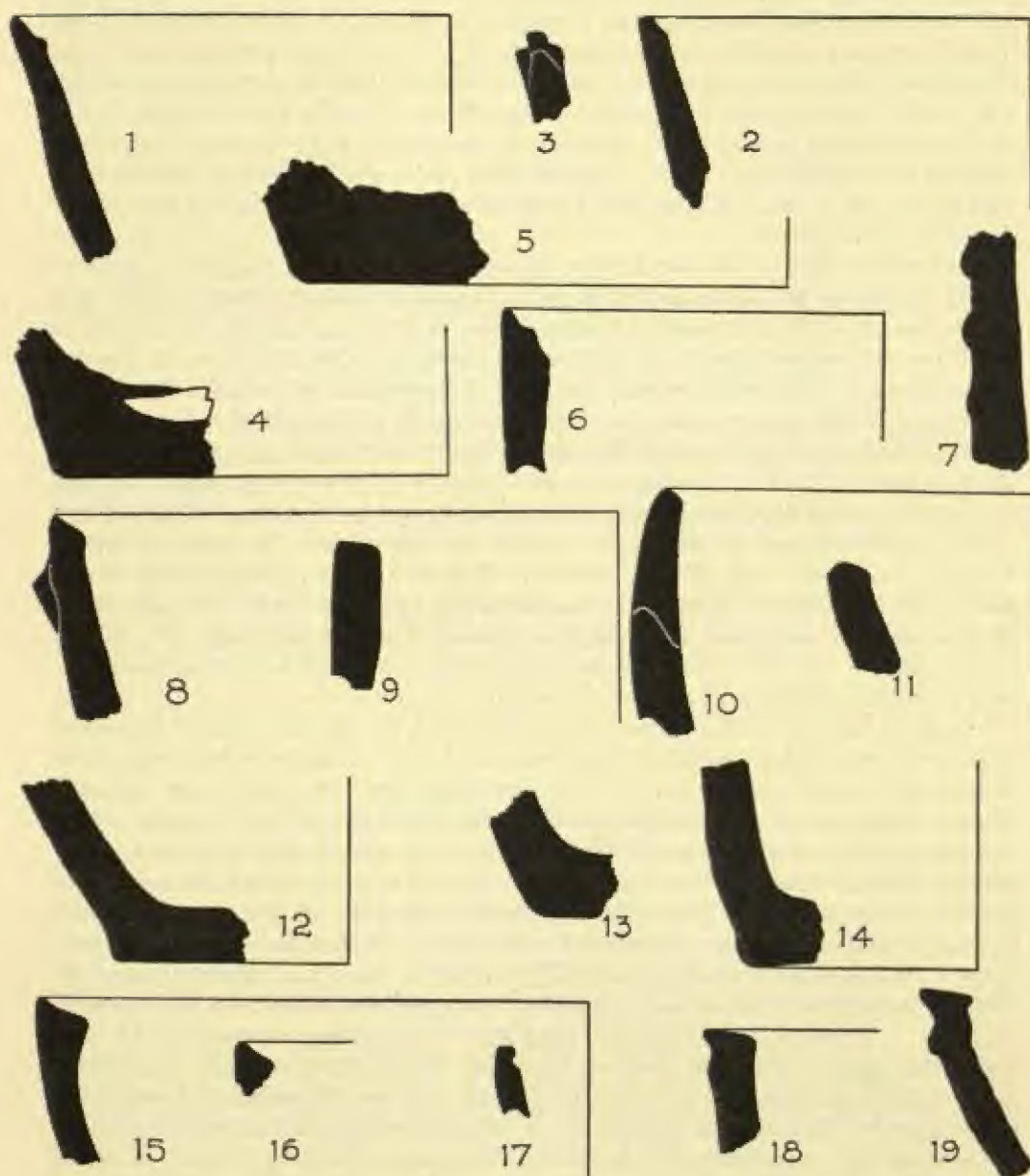


Fig. 6. Sections of pottery from G area ({}).

though some sherds from the ploughed area in the west may really belong here. Most of the best attested vessels were plain. A double-bevelled rim (fig. 6, 6) found under the fallen kerb of the left-hand bed is noticeable. Scalloped rims are attested, but the peculiarly elaborate specimen, in which the scalloping looks like a twisted cable of clay attached to the rim, found at 14.25 among layers of burnt clay in the north-west sector, may really belong to 5 (Pl. X, 2); one of the twists of "cable" became detached in cleaning, and so shows how each twist was composed of a pellet separately stuck on to the rim.

Below the floor of G sherds were again embarrassingly plentiful, but few could certainly be connected with the occupations represented by Hh and Hi. These include part of the rim of a vase of hard ware, only 6 mm. thick, fired to a brownish hue and adorned externally with two flat horizontal ribs, obliquely slashed in a very successful imitation of cordons (Pl. X, 4). From the same context came a very thick sherd whose red exterior seemed to have been brushed over. We should have expected here true grooved ware, Skara Brae C ware, such as we found in 1938 in the deeper levels. No such typical specimens were recovered from the G area. The pattern on the sherd shown in Pl. X, 7, would be appropriate to grooved ware, but has been cut into the body clay. But the sherd, being much worn, may once have been covered with a slip that has peeled off. On the level of Hh we got one sherd with simple grooved lines in the slip (Pl. X, 6), a few others, equally simple, came from layers 5a and 4 outside the door, and from the red layer, 3, under G itself.

Quite a lot of pottery, including complete bases, was found near the bottom of the thick midden deposits, 5a, both in the eastern half of G proper and outside the door. Coarse, reddish, rock-tempered ware was still normal, but none of the sherds exhibited the rich decoration common above the floor of G, while the available rims were mostly simply rounded, none step-bevelled. But in these levels we began to encounter a different ware, grey to warm brown on both surfaces though blackish at the core. In this, large rock fragments are exceptional in the paste, the temper being composed rather of some material, presumably organic, that has disintegrated in firing, giving the ware what Callander¹ happily describes as a "vesicular texture." Though not heavily slipped, the surface is smooth, as the tempering grits no longer project from it; instead the surface is covered with little pits, giving it a "corky" look, to use Edwards's descriptive expression.² Technically this fabric is identical with that of many typical "Neolithic A" vessels from chambered cairns on Rousay (Craie, Kierfea Hill), Eday (Sandyhill Smithy, EO 741), and Calf of Eday (EO 622-3), and fairly close to that of one pot from Kenny's Cairn, Caithness (EO 25),

¹ *Proc. Soc. Ant. Scot.*, vol. lxxi. p. 142.

² *Ibid.*, vol. lxxii. p. 216.

and to another from Unstan itself (EO 168). The available bases from layer 5a are indeed all flat, and the rims generally simply rounded (fig. 6, 9-11). But one vessel of grey ware (found among slabs at 14.05 above datum between the line of wall T and the front of the right-hand bed) has an internally bevelled rim and a low keel on the outside (fig. 6, 8). The keel is indeed formed by an applied strip, like the ribs of the typical Skara Brae vessels, but so, after all, are the carinations on Unstan bowls (at least from Midhowe, Rousay, EO 460, and Unstan, EO 167) and most Windmill Hill bowls from Man and Ulster!

Below layer 5 "corky ware" is still commoner, and some of the surviving rims can be matched among the vessels from chambered cairns. But, it must be repeated, rock-tempered soft sherds were still quite plentiful, though this soft fabric has suffered so badly from the damp that no estimate can be made of the relative proportions of Skara Brae and Unstan wares. The rare rims from the black layer, 4, include one simple rounded rim (152) of a Skara Brae pot with walls 17 mm. thick, and a squashed-down or bevelled rim (158) belonging to a deep bowl of corky ware (fig. 6, 15), found on the pavement below Hi. In the corresponding deposit outside the door we got only one sherd of corky ware, several of rock-tempered, red-surfaced ware, one bearing lines grooved on the red surface (Pl. X, 8).

In the extremely wet red ash under the pavement that we term Deposit 3 this coarse, ill-baked fabric had been practically reduced to the consistency of butter mixed with stones. But it must have been fairly plentiful, and one of the sherds rescued showed a grooved line on the red surface. The better-preserved rims were in a different fabric. In No. 138 (fig. 6, 16) stone grits have been used as temper, but these are not the usual large angular fragments of local rock, but rather small water-worn fragments, really minute pebbles. Such pebble-tempered ware occurs together with the corky fabric in the chambered cairns of Rousay, Eday, and the Orkney Mainland (Unstan); indeed in describing the pottery from the stalled cairn on the Calf of Eday, Callander drew attention to "the occurrence of small pieces of stone, sometimes water-worn, in the paste."¹ The relevant sherds include plausibly "Windmill Hill" squashed-down rims that could be matched in the Neolithic A pottery from the chambered cairns of Unstan (EO 167), Taiverso Tuack (EO 371), and Craie (EO 765).

Finally, from the dark layer, 2, at the base of wall J came a typical club-rim, squashed down outwards (fig. 6, 18), and part of a vessel with a keel just below the flat rim (fig. 6, 19). The latter can only be reconstructed as a shallow, round-bottomed bowl, and of the same general profile as classical bowls from Unstan; it is more exactly matched by a fragment (EO 625) from the chambered cairn on Calf of Eday.

It is therefore clear that the traditions inspiring the makers of the

¹ *Proc. Soc. Ant. Scot.*, vol. lxxi, p. 142.

funerary pottery deposited in the classical chambered cairns of Orkney were alive in the Rinyo area when Deposits 2 to 4 and even 5a were laid down, although at the same time the curious and, as we think, inferior technique distinguishing the bulk of the pottery from Skara Brae was being used there too. Thus, in so far as chambered cairns and "Unstan" pottery define "Neolithic," the primary occupation of Rinyo itself must be thus qualified.

On the other hand, there is an Iron Age "feel" about the pottery from

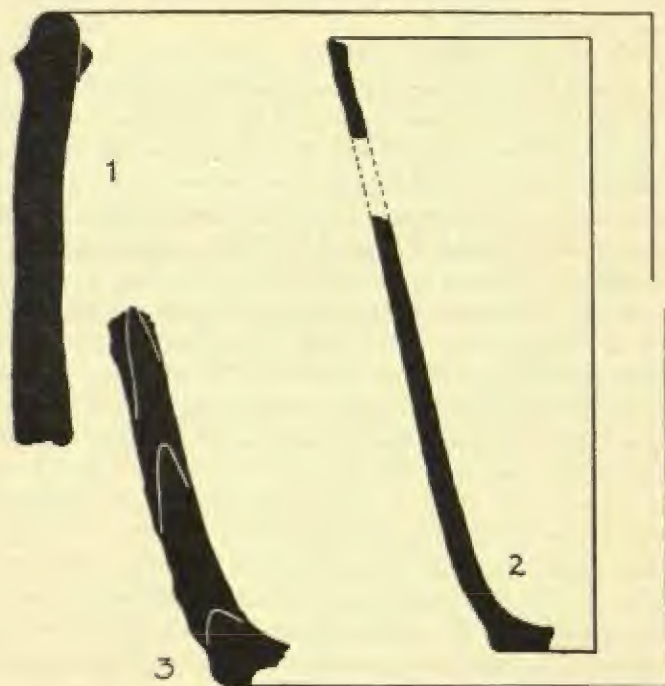


Fig. 7. Sections of pottery from K area (1).

the very ruinous structure termed house K. Thin-walled, rather hard vessels, such as occurred above the floor of G, were prominent here. But again in the inclusion of grit as temper and in the internal bevel of some rims (fig. 7, 2), these carry on native traditions. At the same time a good deal of plain coarse ware of the usual soft kind was collected in the K area, and portions of one large pot decorated very simply with a single horizontal rib in the classical technique (fig. 7, 1, 3). It will be recalled that Stevenson in reporting on sherds from the "Potter's Workshop" on the Calf of Eday¹ detected there a survival of Skara Brae traditions into the Iron Age. So

¹ *Proc. Soc. Ant. Scot.*, vol. lxxiii, p. 182.

the finds from K make it likely, though they do not prove, that the occupation of the area continued into the Iron Age, and that ceramic and even architectural traditions were conserved to that phase.

Another feature of the K area was the discovery of several amorphous lumps of badly baked earthenware in which could be detected the casts of thin grass stems or rootlets that had been incorporated in the clay. These were at first taken for pin moulds, but may really be parts of very thick bases. At the base of the slope on top of which K stood in the exploratory trench driven north of F we found the base of a coarse pot, 7 to 9 inches in diameter, that was actually 1·7 to 1·8 inch thick!

Stone Implements.

No ground stone axe- nor adze-heads were found this year. A fragment from a polished stone celt was, however, recovered from the space between the inner face of G's wall and the back of wall G'.

Skail knives, not noted in 1938, were found in great numbers in the G area. No less than 160 were collected on and above the floor, and specimens occurred in all levels, one being found in the grey clay immediately overlying virgin soil (layer 3) and so undoubtedly *in situ* in the lowest archaeological horizon. Two *smooth balls* of camptonite were lying on the floor of G; one very symmetrical and smooth was found in the left-hand bed, but fell to pieces in transit.

Flint implements too were fairly plentiful. The great majority were small scrapers; of these three came from the F area, ten from layers 6-8 in G, five from layer 5, one from 5a, and two from 4. But in the lower layers there was a sensible improvement in the quality and variety of the flint-work. Layer 5 yielded one large scraper, the 5a deposit outside the door four such, together with fragments of three knives neatly trimmed along the back. A knife-blade with steep trimming was the only flint from layer 3. Another knife-blade was found in dwelling E, only two small fragments on the floor of G. But a blade trimmed along one edge on both faces came from K (fig. 8).

A couple of small but typical anvil-stones from the floor of G must be considered in connection with the flint-knapping. Hammer-stones and rubbers were of course plentiful, but one rubber found in the north-west corner of G deserves special mention. It is a water-worn boulder measuring over all $9\frac{1}{2}$ inches long \times 6 inches wide \times 5 inches thick (fig. 9). Its flattened oval upper surface, 8×5 inches, has been rubbed down so that it is slightly concave longitudinally along one side, but the concavity extends over only 3 inches of its width; the rest of the surface is unground. Its shape is therefore unsuitable for grinding grain. In this context it may be remarked that no sickle gloss was observed on any of the flints any more than in 1938.

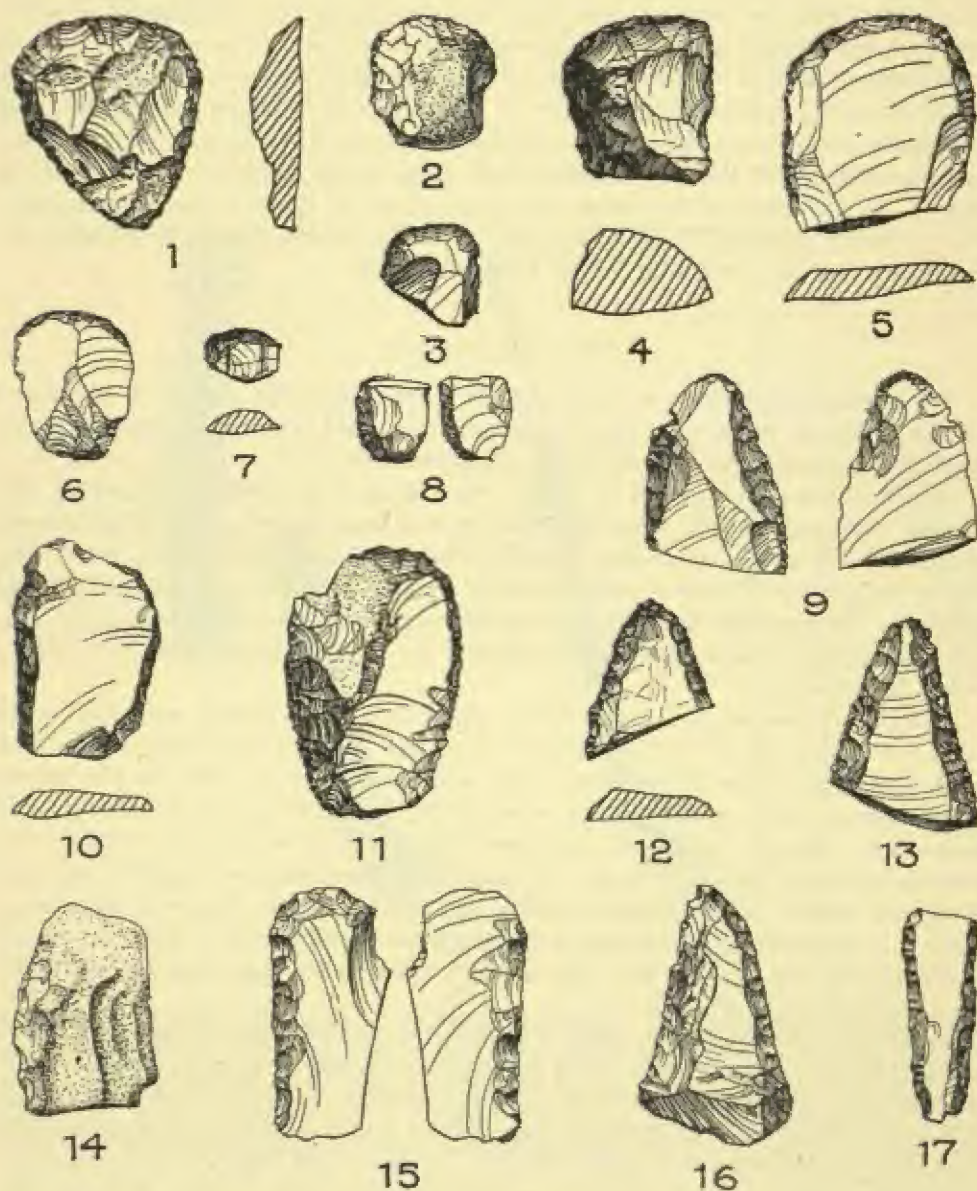


Fig. 8. Flint implements ($\frac{1}{2}$): Nos. 2, 15, K area; 12, E; 17, G area, layer 2 or 3; 6, layer 3; 3, layer 4; 1 and 4, layer 5; 5, 9, 10, 11, 13, 14, 16, layer 5a outside door; 7, 8, above floor-level.

The broken mace-head from K is the twenty-sixth specimen to be recorded from Orkney¹ (Pl. X, 10). It approximates to the pestle type and is made from a granitic stone. The perforation, however, is biconical, not cylindrical as in the best representatives of the type. The surviving end is abraded as if through use as a hammer-stone. The object would have had more dating value had it been complete and fresh. In view of its battered condition it may have reached the floor of K long after its manufacture and original use, whether warlike or ceremonial. Despite analogies

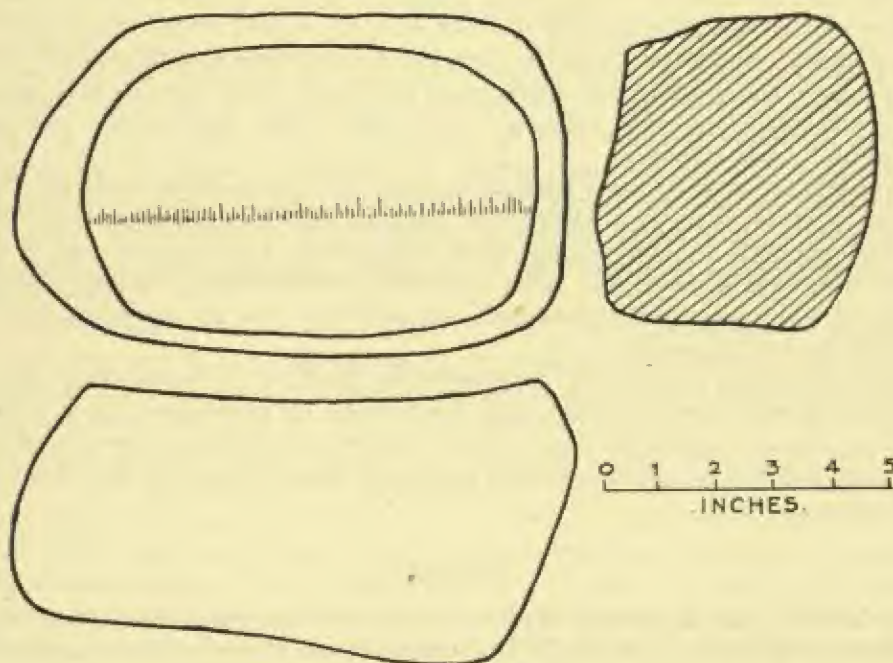


Fig. 9. Rubbing-stone from G.

in the chambered cairns of Arran, Caithness, and Rousay itself,² the type is probably no earlier than the Middle Bronze Age of Southern England. It will be readily admitted that the relatively late phase of Skara Brae culture, exemplified by "house K," was not earlier than that, and that is all we can infer from it.

Bone Tools.—Bone, unless burned, is consumed by the soil of Rinyo. But in deposits saturated with organic matter, and protected by slabs fallen against the wall of dwelling G, two implements were preserved. One was a

¹ *Proc. Soc. Ant. Scot.*, vol. lxx. pp. 94-95.

² Childe, *Prehistory of Scotland*, figs. 16, 17.

pin or awl, made from an ovine metapodial, Skara Brae type A1, the other a fabricator, familiar at Skara Brae as type C. A section of a sheep's metapodial, squared as if to make a cubical bead or a die, was found, burnt, near the hearth of E.

Miscellaneous.

Four little balls of clay, just like modern marbles, were found in early layers. Two came from 5a outside the door of G, one from between Hh and Hi, and the fourth from a deep layer under F. In view of the absence of flint arrow-heads, it would be tempting to regard these little balls as sling pellets. Such are regularly found in the numerous early sites in Iran, Hither Asia, the Balkan peninsula, and Southern Italy, from which arrow-heads are conspicuously missing. But these sling pellets are normally amygdaloid, not spherical.

A single lump of nodular hæmatite, such as is so common at Skara Brae, turned up this year well above the floor of G. Pieces of pumice, some grooved perhaps in sharpening bone awls, were relatively common and occurred as low as layer 5a. One appeared deliberately rounded. Several lumps of whalebone were observed, but all were too far decayed for any shape to be recognisable.

Part of a large stone basin or mortar lay high up in the midden over G. A large hole had been worn through the bottom by prolonged use. A small and rough stone "paint pot" or "lamp" was recovered from layer 3 under G. From the same level came a pebble that had been perforated as a pendant, but broken.

Charcoal.

As in 1938 quite a number of pieces of charcoal, all small, were discovered, and that at all levels. Mr M. Y. Orr, of the Royal Botanic Garden, has very kindly examined these for us, and recognised willow, birch, and alder, and perhaps poplar, but also pine and oak. The first named were presumably derived from local shrubs or trees used as fuel. Pine, represented by at least two specimens, is less easily accounted for. In view of Erdtmann's pollen-analyses, the growth of pines in Orkney during the last 5000 years seems unlikely. Mr Orr suggests it might have come in the form of driftwood. The single piece of oak (charcoal) was found under a secondary threshold slab just inside the door of G. Though we could not determine its shape, we thought it represented some artifact, perhaps a handle, even before we knew its material. A local growth of oaks is even less likely than pines. So it would represent an "import," unless again it arrived as driftwood.

IV.

THE HORIZONTAL WATER-MILL AT DOUNBY, ON THE MAIN-
LAND OF ORKNEY. By STEWART H. CRUDEN, A.R.I.B.A.,
F.S.A.Scot.*Read February 9, 1948.*

It is not my intention in this paper to deal with the history of primitive horizontal water-mills in general, for that subject has been treated exhaustively by other authorities mentioned in the appendix, and I have no contribution to historical research to submit from a study of this particular example, but rather to put on record its hitherto unpublished features, for it is under the charge of the Ministry of Works as an ancient monument, and being in good working order—itsself an uncommon feature—thereby merits notice.

This interesting water-mill at Dounby (Pl. XII, 1) is the last of its kind in Orkney, but one of the best surviving examples of a type more numerous represented in the Shetlands and the Faroes, and by no means uncommon in the Western Isles and Ireland. It appears from its extensive distribution throughout Europe and Asia to have an early origin and a late survival. That it has an early origin is not surprising when one considers its simple mechanism, not from the point of view of mere simplicity being an indication of antiquity, but from a consideration of its component parts and the method of operating them. We see that this type of mill is in fact a mechanised hand-quern, operating not by manual or animal labour, but by machinery propelled by a controlled rush of water of moderate force derived from the small streams in these islands.

As the water supply is scant, the stream is dammed at a convenient place some distance above the mill so as to form a reservoir or mill-pond from which the water, controlled by a simple sluice, is diverted along a mill-lade to the mill-house and directed therein down a trough to the fins of the mill-wheel which lies in a horizontal position; hence the type-name of horizontal water-mill (Pl. XI, 1). These fins are frequently housed in the wheel obliquely, the more effectively to revolve and turn the vertical spindle which passes upwards through the lower mill-stone and is fixed to the upper, causing it to rotate upon the lower. The pressure of one stone upon the other is regulated by means of wedges, thus permitting flour of different degrees of fineness to be milled.

The corn is held over the mill-stones in an open pyramidal box called

the hopper, and is fed into the circular aperture of the upper stone through a tray which can be raised or lowered to control the flow of grain, the impulse that projects the grain from this tray being a joggling motion usually created by a small piece of stone resting upon the upper mill-stone and attached to the tray by a string. The rotation of the mill-stone, which has a rough surface, irregularly tugs the string and shakes the tray, from which the grain falls into the eye, fast or slow, according to the way the tray is set.

The design and performance of the many hundred mills of this character recorded by travellers is identical, save for the minor differences of detail to be expected in primitive economies where the basic idea is the governing one. For example, the Dounby mill has a variant of the joggling operation (Pl. XI, 2). Instead of a loose piece of stone connected to the tray by string, we have here a piece fixed to the upper stone and revolving with it, which strikes against a wooden tongue projecting from an armature attached to the tray, thereby causing the tray to eject grain once per revolution. Also, we have here the hopper supported over the stones upon a timber framework, whereas it is usually suspended from the rafters by ropes. Other noteworthy features are the sunk flour-box, the string-and-peg contrivance for raising and lowering the angle of the tray, and the double tier of fins upon the mill-wheel (fig. 1).

The mill-house is of two compartments: an upper, containing at one end the entrance door (Pl. XII, 2) and a wind-door opposite for the escape of chaff, and at the other end the grinding apparatus described; and a lower chamber, containing the horizontal mill-wheel upon which the water debouches from the chute, and from which it escapes into the mill-overflow (fig. 2), whence it is conducted back to the natural stream again and reused further along its course by another mill.

Many mills were worked from the same stream, as one sees from the photograph featuring the mills at Sandness, Shetland (Pl. XII, 3), not on a commercial basis—they are too small for that—but on a family basis, and they were open to all.

A popular name for such mills is Clack Mill, derived from the distinctive clacking noise they make when in operation—the noise of the clapper against the tray or armature—and this name provokes interesting conjectures concerning place-names such as Clockmill Road and House, Edinburgh, and Clickimin, Peebles, and the exhortation addressed to the “selender wyves” in the “Clerke’s Tale” of Chaucer, in the following terms “Ay clappeth as a mill I you consaille.” Stoddart, in his *Remarks on Local Scenery and Manners in Scotland*, 1799 and 1800, describing the Water of Leith, which he states served eighty mills, refers (vol. i. p. 101) to “the occasional clack of an adjoining mill”; while Miss Francesca French, joint author of *The Gobi Desert*, makes a more distant reference by recording ninety-nine on the banks of one small stream in the Shansi Valley in North China.



1. Fins of mill-wheel.



2. Hopper and mill-stone.

STEWART H. CRUDEN.

[To face p. 44.



1. Horizontal Mill at Dounby.



2. Entrance.



3. Mills at Sandness, Shetland.

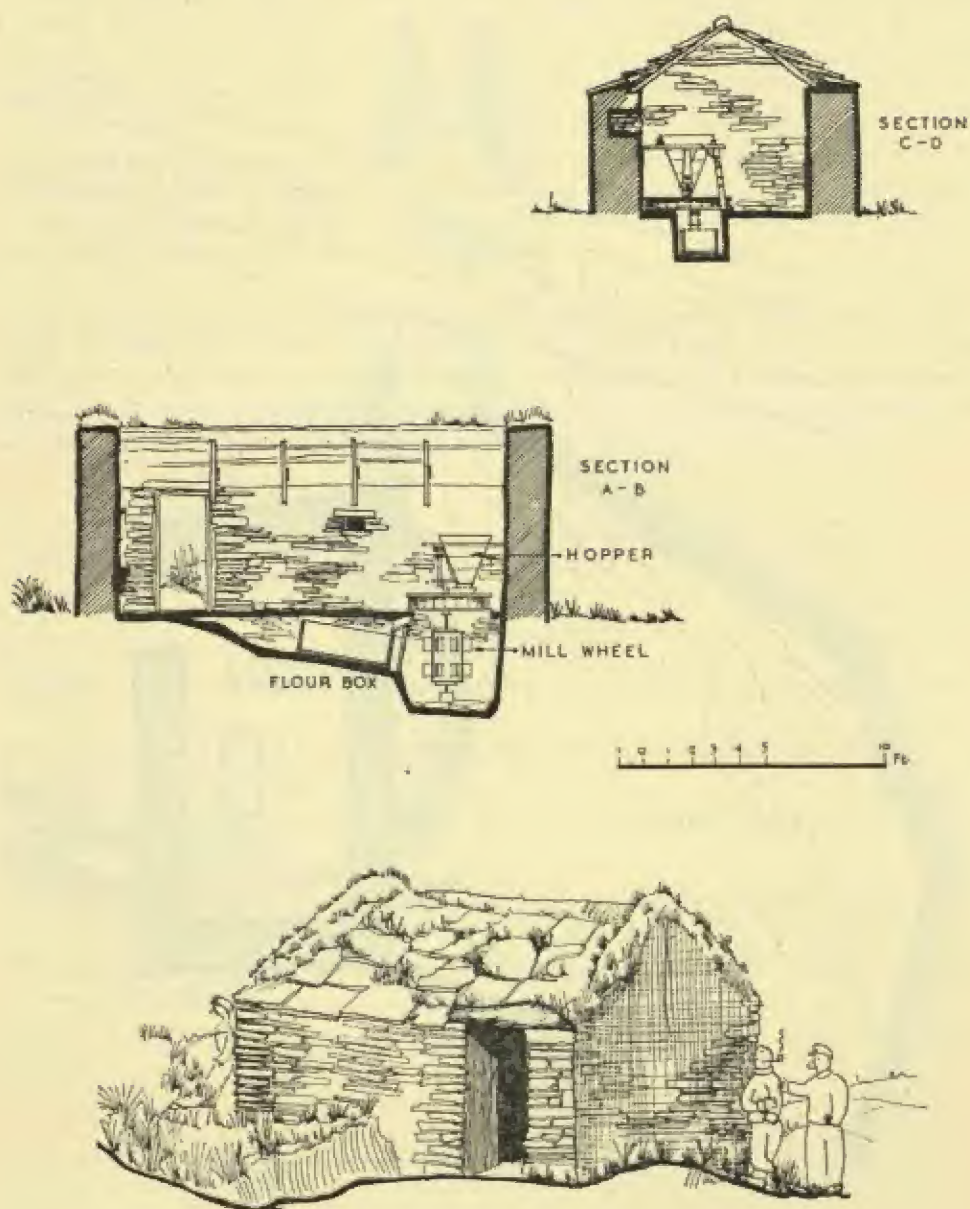


Fig. 1. Horizontal mill at Dounby, Orkney: Sections.

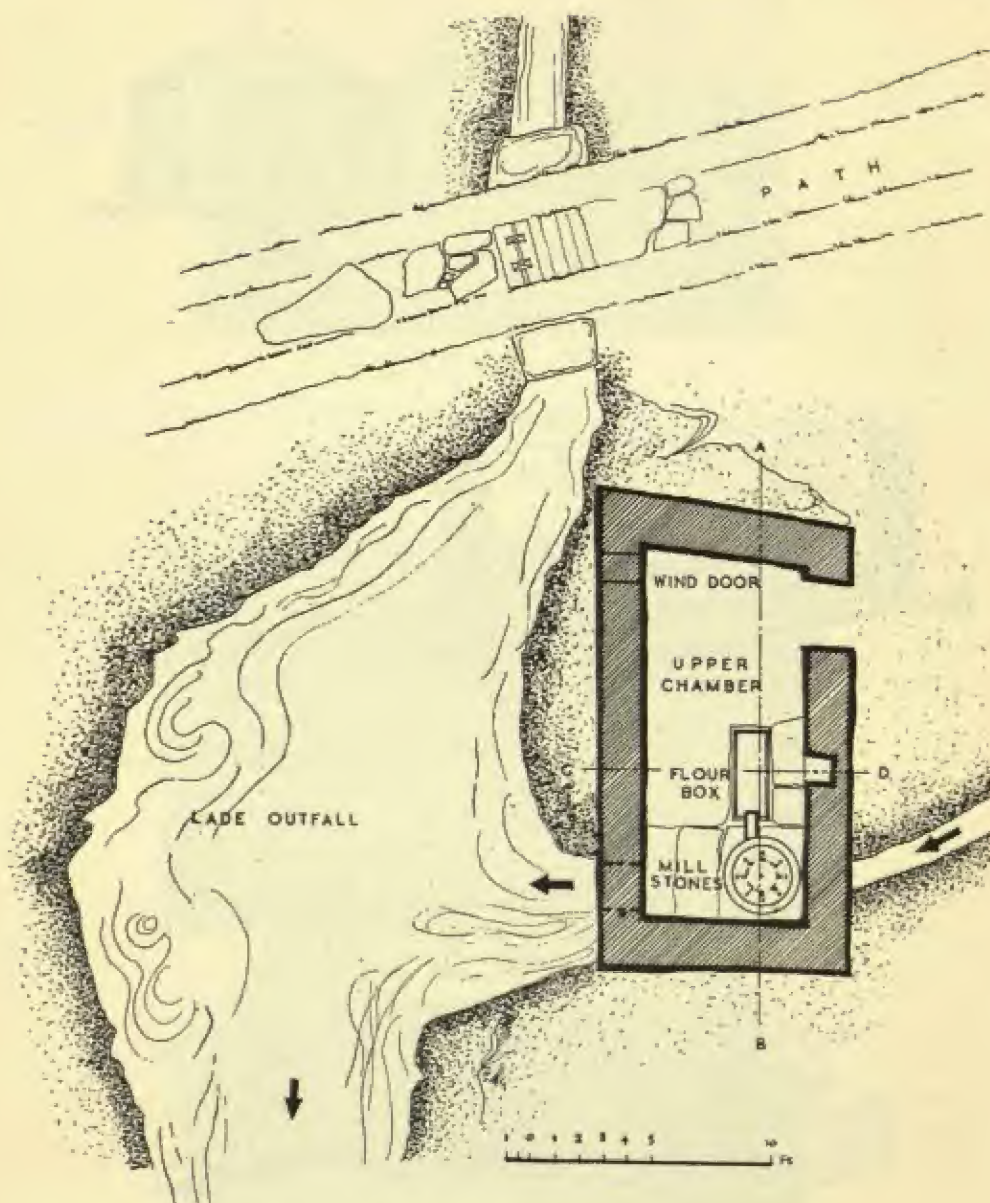


Fig. 2. Plan of Dounby mill.

The Orkney Archæological Society repaired the mill before it was offered, in 1932, by Mr James Flett of Dounby to the then Office of Works. Mr John Mooney, a Fellow of the Society of Antiquaries of Scotland, was largely responsible for encouraging this transference of ownership of the mill, and in other ways took an active interest in its care and maintenance. On assuming guardianship the Office of Works carried out certain repairs to the building and machinery, and engineered a water-supply from the stream.

In the Belfast Municipal Museum there is a scale model of this mill for comparison with a similar Irish example.

I am indebted to Dr Aage Roussell for the loan of the photograph of the mills at Sandness, Shetland, and to the Royal Commission on Ancient Monuments for the photograph of the mill-wheel, the other photographs being from the records of the Ministry of Works. The drawings I have made are also derived from the Ministry's records.

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V.

SOME OBSERVATIONS ON THE BROCHS. BY A. GRAHAM,
M.A., F.S.A.Scot., F.S.A.*Read May 12, 1947.*

SUMMARY OF CONTENTS.

	PAGE
1. INTRODUCTORY	48
2. NUMBERS AND DISTRIBUTION OF BROCHS	49
3. ARCHITECTURAL FEATURES:	
(i) Entrances	54
(ii) Guard-cells	56
(iii) Mural Cells and Basal Galleries	57
(iv) Upper Galleries and Stairs	62
(v) Searcements	67
(vi) Voids	71
(vii) Roofing and Wall-heads	71
(viii) Wells and Tanks	76
(ix) Hearths	77
4. SHAPE AND DIMENSIONS:	
(i) Ground Plan	77
(ii) Diameter	78
(iii) Height	80
5. EXTERNAL DEFENCES	87
6. RECAPITULATION	90
APPENDIX (List of Brochs, etc.)	91

1. INTRODUCTORY.

The main features of the typical broch are very well known, and general information on the subject is not difficult to come by.¹ Further detailed descriptions of individual brochs are to be found here and there

¹ *E.g.* Anderson, *Scotland in Pagan Times: the Iron Age*, pp. 174 ff.; *Antiquity*, vol. i. pp. 290 ff., R.C.A.M., *Inventory of Orkney and Shetland*, vols. i. pp. 31 ff.; ii. Nos. 263, 553; iii. Nos. 1149, 1206, 1246.

in the literature,¹ and the inferences regarding their origin and date that can be drawn in the light of the most recent evidence have been discussed by Professor Childe.² But as soon as we leave the realm of generalities we encounter a considerable body of facts which are much less familiar to antiquaries, and these, though they may not lead to important new conclusions, are yet relevant to any attempt to fill in the outline sketch and at the same time possess a certain intrinsic interest. The purpose of the present paper is accordingly to make some of these facts conveniently accessible to future students of the subject; they relate mainly to the distribution and to the physical features of the brochs, while a list of the structures themselves is given in an Appendix.³

The material on which the paper is based has been taken for the most part from the published descriptions of the brochs, but these descriptions have been eked out with information gained in some cases by personal visits to the monuments themselves, and in others by discussion with observers whose experience has been wider than my own. And here I desire to express my particular indebtedness to Professor Godfrey Thomson, D.C.L., D.Sc., for the statistical and other calculations that he was good enough to make on my behalf; to Mr A. O. Curle, C.V.O., LL.D., F.S.A., Mr G. P. H. Watson, F.R.I.B.A., R.S.W., F.S.A.Scot., and Mr C. S. T. Calder, A.R.I.A.S., F.S.A.Scot., who have given me the benefit of their intimate acquaintance with a very large number of brochs; to Professor V. G. Childe, D.Sc., D.Litt., F.B.A., F.S.A., Mr J. S. Richardson, F.S.A.Scot., H.M. Inspector of Ancient Monuments, Professor S. Piggott, B.Litt., F.S.A., Mrs Piggott, F.S.A., and others who have given me information on a variety of points; and to the Royal Commission on the Ancient and Historical Monuments of Scotland for permission to make use of certain unpublished data.

2. NUMBERS AND DISTRIBUTION OF BROCHS.

It will be convenient for the purposes of this paper to regard Scotland as being divided into the following six regions, shown on the map in fig. 1:

¹ E.g. *Archæologia Scotica*, vol. v. pp. 71 ff., where references are given to eighteenth-century notices of certain brochs; *ibid.*, pp. 341 ff. and 365 ff.; Beveridge, *Coll and Tiree*, pp. 73 ff.; *Proceedings of the Orkney Antiquarian Society*, numerous articles on the Orkney brochs; *Proceedings of the Society of Antiquaries of Scotland*, numerous papers, of which the most important are: vols. xxxv. pp. 122 ff.; l. pp. 241 ff.; lv. pp. 83 ff. and 110 ff.; lxxviii. pp. 444 ff.; R.C.A.M. County Inventories, especially of Caithness, Sutherland, Orkney and Shetland, and the Outer Hebrides, Skye and the Small Isles. These Inventory articles contain many references to descriptions in *P.O.A.S.*, *F.S.A.S.*, and elsewhere; while for areas which have not yet been inventoried some literary references have been given in the Appendix at the end of this paper.

² *Prehistory of Scotland*, pp. 197 ff., and Map IV; *Prehistoric Communities of the British Isles*, pp. 246 ff.; *Scotland before the Scots*, pp. 89 f. and 128 f.

³ This list brings up to date an earlier one published in *The Antiquaries Journal*, vol. xxiii. Nos. 1, 2, pp. 19 ff., by embodying the results of field-work done since the earlier list was drawn up. It also includes a number of "comparable structures."

I. Shetland; II. Orkney; III. Northern Mainland, *i.e.* the mainland lying north of a line drawn from Gruinard to Tain; IV. West Coast and Inner Islands, comprising the western coastal areas from Gruinard to Kirkcudbright with the islands of Skye, Raasay, Tiree, Mull, Islay, etc.; V. Outer Islands; VI. Central and Eastern Mainland, or virtually the rest of



Fig. 1. Sketch-map of Scotland, showing subdivision into Regions.

the country. The quantity of material available, and its distribution among these six regions, is shown in Table I, while detailed information, with references to literature, will be found in the Appendix.

In the table opposite, "brochs" (col. *b*) are structures positively identified as brochs and still showing remains; "broch sites" (col. *c*) are

the sites of vanished structures known to have been brochs; "uncertain examples" (col. *d*) are structures some of which probably are and others may possibly be brochs, though none have been identified as such; and "comparable structures" are not brochs but embody certain features which also appear typically in broch architecture. With the unimportant exceptions noted below under (i) and (ii) the foregoing classification follows the published accounts of the structures, and in particular no attempt has been

TABLE I.—NUMBERS AND DISTRIBUTION OF BROCHS.

Region. (a)	Brochs. (b)	Broch sites. (c)	Uncertain examples. (d)	Totals of cols. (b) to (d). (e)	Comparable structures. (f)
I. Shetland . . .	51	30	14	95	2
II. Orkney . . .	42	20	43	105	..
III. Northern Mainland .	169	17	41	227	2
IV. West Coast and Inner Islands . . .	28	..	21	49	28
V. Outer Islands . . .	8	..	20	28	6
VI. Central and Eastern Mainland . . .	6	..	2	8	..
Totals . . .	304	67	141	512	38

made to discuss or appraise the distinction at present recognised between the brochs and the broch-like "galleried duns," or to discuss how, if at all, they are related. For this far too little evidence seems to be available as yet, and the most that can usefully be done is to sound some notes of warning.

The following points may be noted in connection with the foregoing table:—

(i) While the figures are not exactly the same as those given by Childe ¹ or by the Ancient Monuments Commission,² the differences are small and

¹ *The Prehistory of Scotland*, Map IV.

² *Inventory of Orkney and Shetland*, vol. i. p. 31.

affect only points of detail. As will be explained in the next sub-section, rather more "uncertain examples" have been recognised in the Inner and Outer Islands than were included in the Commission's estimate.

(ii) It would be wrong to pay too much attention to the fact that the figures in columns (b), (c), and (d) do not stand in any regular ratio to one another, or to their totals (col. e), in the several regions. This apparent irregularity is probably due in great part to special circumstances that affected the compilation of the records. Thus the comparatively high proportion of "uncertain examples" recorded in Orkney may be due to the possibility—always present to the minds of the Ancient Monuments Commission's officers—of unexplored mounds turning out to be chambered cairns rather than ruined brochs; this was probably felt to be of greater urgency in Orkney than in either Shetland or the Northern Mainland. The proportion of "uncertain examples" is also high in Regions IV and V, but here again possible explanations exist. Region IV, for example, contains the island of Tiree, with a series of monuments which have been so poorly described that their true nature is doubtful, but which are far more likely to be brochs than anything else; and also Mull, where some structures exist which cannot be positively identified without excavation. In Region V, again, discrepancies appear between the Ancient Monuments Commission's lists and data put on record by Captain Thomas.¹ It seems clear that the Commission's surveyor, in certain cases, classified as "duns" ruins which had become quite featureless by the date of his visit but which Thomas, more than fifty years earlier, had seen reason to identify as brochs. Some "uncertain examples," not recognised by the Commission, have accordingly been admitted here. The absence of "broch sites" in Regions IV and V likewise suggests a difference in the methods of the Commission's survey from those employed in Regions I, II, and III. The "total" figures, however, as given in column (e), go some way towards evening out these accidental discrepancies.

(iii) All the totals given are likely to be below the numbers that originally existed. For one thing, brochs are particularly liable to destruction by farmers and by builders, as they provide large quantities of useful stone and are often situated on good agricultural lands; for this reason the rate of their destruction will have been exceptionally heavy in the better agricultural districts, such as parts of Orkney and Caithness. Again, no brochs are recorded on the long stretch of coast between Loch Broom and the Kyle of Loch Alsh; this area has not been surveyed by the Ancient Monuments Commission and is also difficult of access to casual antiquaries; it may therefore be that some further examples remain to be discovered in this district.

(iv) While nothing would be gained by attempting to express the density

¹ *Arch. Scot.*, vol. v, pp. 305 ff.

of brochs in any given region on a basis of their numbers per square mile, the heavy concentrations occurring in the Northern Mainland, in Orkney, and in Shetland immediately leap to the eye. The concentration in the Outer Islands will likewise appear fairly heavy if account is taken of the poor quality of much of the land. The West Coast and Inner Islands, however, show a considerable falling-off; while Region VI, which comprises the whole of the rest of the country, is hardly in the picture at all.

(v) If it is assumed that any type of structure is to be found in its greatest numbers and highest development at or near its place of origin, the foregoing facts would be enough to prove that the broch was a product of Regions I, II, or III, or possibly of Region V. They would, however, hardly provide a criterion for preferring any one of these four to the others. But in view of the broch-builders' admitted ability to move about freely by sea, it would clearly be unsafe to be guided by any such assumption in the present case, as the broch might easily have been transferred, by sea-going people, at an early stage of its history, from its place of origin to another accessible locality—in which, again, it might later have enjoyed a long and eventful life. It will therefore be best simply to note the distribution without venturing to define its significance.

(vi) In contrast to what was said above under (iv), nearly all the "comparable structures" occur in Regions IV and V, that is to say on the Western Mainland coast or in the Inner or Outer Islands. Consequently, if any of these structures were assumed to be ancestors of the broch, we should have to suppose that this latter was first evolved in the west, perhaps in the Hebrides, that it was imported thence to the mainland and the northern isles, and that it subsequently attained its greatest numerical development in these localities. This assumption, however, cannot at present be based on any more solid grounds than superficial resemblances in points of structural technique, and in view of the proximity of Ireland, with its own school of galleried building, it would be unwise to draw premature conclusions about the broch's place of origin from mere considerations of typology and distribution.

(vii) The total number of brochs is sufficiently large to make it clear that, in the area and period of their most general use, they must have been an extremely important social factor. It must not, of course, be assumed that all brochs are of the same age—indeed, brochs are sometimes placed so close to one another that the opposite conclusion seems probable, while the technical skill shown by their builders is so great as to argue long experience in dry-stone construction. Mid Howe and West Howe, or Dun Troddan and Dun Telve, might be suggested as cases in point, or the series occurring on the north shore of the Loch of Harray. Moreover, that a broch might collapse in early times was proved by excavation at Gurness; while Mid Howe had to be shored up, though at a late stage in its career,

and rebuilding seems to have taken place at Kintradwell. Oxtro, again, must have already been reduced to the condition of a grass-covered mound by the date at which Norsemen used it as a place of burial; and other similar examples could probably be cited. On the other hand, there is nothing in their respective states of preservation to suggest that, *e.g.*, Dun Telve and Dun Troddan are not more or less contemporary. However this may be—and the answer to the problem can only be given by the spade—it is clear that the broch is not to be regarded as a mere architectural freak but, as Professor Childe has already shown,¹ possesses an historical significance which is comparable, in its way, with that of the mediæval castle.

3. ARCHITECTURAL FEATURES.

(i) *Entrances*.—Some sort of information, not always very full, is available about the entrances of ninety-six brochs and "uncertain examples"; but nothing like this number are in good preservation, and the lintels of the entrance-passage are still in position in less than a dozen cases. Normally there is a single entrance only; the entrance-passage passes radially through the wall and has a "guard-cell" on one or both sides; there are checks in the sides of the passage to receive a door, often with stone slabs for door-jambs and a transverse kerbstone for threshold. The door-fittings are frequently double, one set being placed outside the doorways of the guard-cells and the other inside. The doors were evidently secured by massive wooden bars, sliding in holes of which the inner ends sometimes ran back into the guard-cells. The passages are clearly intended for the strict control of entrants, being rarely over 4 feet in width and frequently as narrow as 2 feet 6 inches or less at their outer ends,² and being subject to further constriction where the door-jambs project from the passage walls.

The foregoing normal arrangement is, however, subject to modification in certain cases. The first of these consists of the possession of more than one entrance, as two entrances are recorded in each of seven cases, and one broch (Clickimin) has three. But this departure from the general rule is more apparent than real, as the secondary character of one of the two entrances is certain in two brochs (Ness and Yarrow), and seems to stand to reason in three others (Brounaban, Keiss, and Keiss Road). At Dun Fhiadhairt, too, the second entrance may possibly be secondary, though no trace of disturbance exists, as it is abnormally small and also leads out past the base of the stair where the wall could have been pierced with least difficulty and with least danger of collapse. Nor is it easy to see why a

¹ *The Prehistory of Scotland*, p. 204.

² A number of samples taken from the "certain" brochs gave the following average breadths: Shetland, 2 feet 3½ inches; Orkney, 3 feet 7 inches; Caithness, 3 feet ½ inch; Sutherland, 2 feet 11 inches; Outer and Inner Islands, 2 feet 8 inches. The passage at Everley is recorded as having been narrowed to 1 foot 6 inches between the door-jambs.

primary entrance should have been so placed as to render the stair, which was presumably an important defensive feature, so easily accessible to intruders.¹ The remaining example, on Freswick Links, has now completely disappeared, but a photograph² preserved in the Library of the Society of Antiquaries of Scotland supports the idea that the entrance at the base of the stair was secondary. Of the two extra doorways at Clickhimin, one, as at Dun Fhiadhairt and in some of the Caithness examples, passes out at the bottom of the stair, while the other opens from a passage where the thickness to be pierced is not great. Both these last are also above ground-level,³ and neither possesses any of the normal features of a broch entrance. There is therefore nothing in any of these cases to modify the accepted view that the typical broch possesses one entrance only.

Other divergences are less important. In nine cases the passage is not on a strictly radial line, but either runs somewhat obliquely through the wall or is slightly curved (*e.g.* Coldoch and Tor Wood).⁴ Frequently, again, the passage is not of equal width throughout, but expands slightly behind the checks (*e.g.* Netlater), and this plan may be varied further by a contraction at the inner end (*e.g.* Dun Telve). At Dun Ard an t-Sabhail the passage is broadest at its outer end. The apparently pointless arrangement of placing the checks inside the guard-cells, which is noted at the Castle of Bothnican and at Dail Langwell, can be explained by supposing that an outer door existed as well, outside the checks, but that its frame was wooden and has perished. This suggestion is supported by there being a cavity for a wooden door-jamb at the Hill of Works, and it would also fit the cases in which there are no checks at all (*e.g.* Dun Ard an t-Sabhail) or only one (*e.g.* Lingro).

Some miscellaneous features of interest are the spaces left between the lintels of the entrance-passage (*e.g.* Mid Howe), perhaps to provide for defensive action from a room over the passage; drains running out from the court, under the passage (*e.g.* Nybster); and the use, as outer lintels, of massive blocks of stone triangular in elevation (*e.g.* Culswick). Four such lintels survive, and a fifth is recorded at the vanished Dun Alascaig;⁵ and while no doubt partly ornamental, they may also reflect the idea that a lintel's maximum bending moment is at the centre of its span, and that it

¹ This last consideration will also apply to Brounaban, Keiss, and Keiss Road if the stairs in question are themselves regarded as primary. On this see p. 65.

² The position of Freswick House in the background of this photograph proves that the north point has been reversed in the published plan (R.C.A.M., *Inventory of Caithness*, p. 14).

³ Gordon appears (*Itinerarium Septentrionale*, p. 166) to have entered Dun Telve through "a hole" at the level of the second gallery (*cf.* p. 82); and while this may well have been made by a previous explorer, or have resulted from the decay of the structure, it is just possible that it may have been a subsidiary entrance like those seen at Clickhimin.

⁴ This latter feature may be a local peculiarity, as it has not been noted elsewhere than in these two examples, which are only some thirteen miles apart.

⁵ The triangular block found outside the broch at Keiss had no doubt originally served as yet another example.

consequently needs to be strengthened at this point. The discovery of socketed stones in some excavated entrance-passages shows that in these cases the doors turned on pintles.

Though broch doorways are of course larger than those of the Stone Age settlement at Skara Brae, it is remarkable to see how they reproduce what is virtually the same arrangement of jambs, sills, and bar-holes.

(ii) *Guard-cells*.—The positions of the guard-cells are known in eighty-four cases, and analysis of these shows that what is often thought of as the normal arrangement of the cells, *i.e.* one on either side of the entrance-passage, in fact occurs in only eighteen cases (21 per cent.); a single cell occurs in forty-four cases (52 per cent.)—thirty-four (40 per cent.) on the entrant's right and ten (12 per cent.) on his left—while in twenty-two cases (26 per cent.) there are no guard-cells at all. Provision is thus made, where guard-cells exist, for engaging attackers on their open or shieldless side in fifty-two cases (62 per cent.) and on their covered side in only twenty-eight (33 per cent.). The geographical distribution of these several arrangements is shown in Table II.

TABLE II.—GUARD CELLS.

Region. (a)	Cell on			Total defence on attackers'		No cells on entrance- passage. (e)	Totals of cols. (b)+(c) +(d)+(e)
	open side. (b)	covered side. (c)	both sides. (d)	open side. (b)+(d)	covered side. (c)+(d)		
I. Shetland . . .	2	..	1	3	1	4	7
II. Orkney . . .	5	1	5	10	6	2	13
III. North Mainland .	21	2	8	29	10	10	41
IV. West Coast and Inner Islands .	4	5	2	6	7	4	15
V. Outer Islands. .	1	1	1	2	2	..	3
VI. Central and Eastern Mainland . . .	1	1	1	2	2	2	5
Totals . .	34	10	18	52	28	22	84

On the shape and size of guard-cells, however, evidence is only forthcoming from thirty-eight brochs, and the impression that it gives is very varied. The cells are in general round, oval, elongated-oval, sub-oval with straightish sides and inner end, or squarish; but there seems to be no ruling system, and two cells of different size and shape may occur in the same broch. Squarish cells, however, seem to occur only in Orkney, with the possible addition of one at Torwoodlee; and in Orkney likewise are the only two certain cases,¹ Gurness and Mid Howe, of guard-cells which end internally in complete mural galleries. One broch in Shetland (Clumlie) has a guard-cell with a second door opening into the court; elsewhere this arrangement occurs only at Dun Beag in Skye, at Ousedale Burn in Caithness, and at East Kinnauld in Sutherland.² Otherwise the cells in both Outer and Inner Islands are chiefly oval or round, and are often small; and the oval or elongated-oval plans prevail in the other districts. At Hillhead (Caithness) both cells are long and slightly curved, tapering at their inner ends.

(iii) *Mural Cells and Basal Galleries.*—The arrangement of mural cells, other than those at the entrance, and of lengths of gallery where these occur at ground-floor level, is so varied that it defies summary description. Moreover, many of the brochs in which traces of cells and basal galleries can still be made out are so ruinous that no detailed measurement or planning of these features has been possible, while in addition some of the older descriptions are regrettably imprecise. It must therefore suffice to say that the mural cells are generally of beehive form, and are rarely lintelled; that they are usually round, oval, or elongated to a club-like form; and that a single entrance from the court may often give access to two cells, or to a cell and a staircase, opening to right and left. The cells are unlighted, and a few contain aumbries.

Some details, however, can be given regarding the openings leading to the cells, as these are more adequately recorded than the cells themselves. Thus, if we confine our inquiry for the present to brochs in which cells alone occur at ground-level, or cells with lengths of gallery so short as to be comparable with cells, and postpone discussion of those in which true galleries are found, we can point to fifty-three structures—of which a few are "uncertain examples"—in which the number and positions of openings leading to mural cells can be discovered or confidently inferred. "Position" is here taken as meaning position in the circuit of the wall relatively to the broch-entrance, and accordingly those cases—mentioned in the previous section—in which the original position of the broch-entrance was itself in doubt have been omitted from the count.

The numbers of cell-entrances per broch as they occur in the several Regions are shown in Table III.

¹ Sandray (Barra) may be another case, but the structure is too ruinous for certainty.

² It can be paralleled in Ireland, in the fort on Lough Doon, near Ardara, Co. Donegal.

TABLE III.—NUMBERS OF ENTRANCES TO MURAL CELLS.

Region.	Number of cell-entrances per broch.					Number of brochs considered.
	1.	2.	3.	4.	5.	
I. Shetland	2	1	1	1	..	5
II. Orkney	2	1	2	..	..	5
III. Northern Mainland . .	15	10	..	1	1	27
IV. West Coast and Inner Islands	4	3	3	..	..	10
V. Outer Islands . . . .	..	1	..	1	..	2
VI. Central and Eastern Main- land	2	..	1	1	..	4
Totals	25	16	7	4	1	53

From this table a few miscellaneous facts appear. In the first place, it is clear that the most usual arrangement is a single entrance; this very commonly leads to a little lobby off which the stair opens to the right and a cell of some sort to the left. This arrangement accounts for 47 per cent. of all the cases shown in the table. Another common arrangement is that which provides two entrances, as this accounts for a further 30 per cent. of the total number of cases. It will be noted, too, that the weight of these figures lies in the Northern Mainland, as either one or two entrances occur in twenty-five out of twenty-seven examples drawn from this region, while the West Coast and Inner Islands, with a total of ten cases, show this arrangement in only seven. Other arrangements of entrances are fairly evenly distributed, though the five cells found at Feranach, which leave only an aggregate length of 47 feet of solid walling in a circuit of 155 feet, seems to be something of a freak. The fact that three openings occur in only seven cases deserves to be noted, as this sometimes tends to be regarded as the normal arrangement in consequence of its occurrence in the much-described Broch of Mousa.

The manner in which the cell-entrances are disposed about the courts is shown diagrammatically in fig. 2, the number of cases in which each

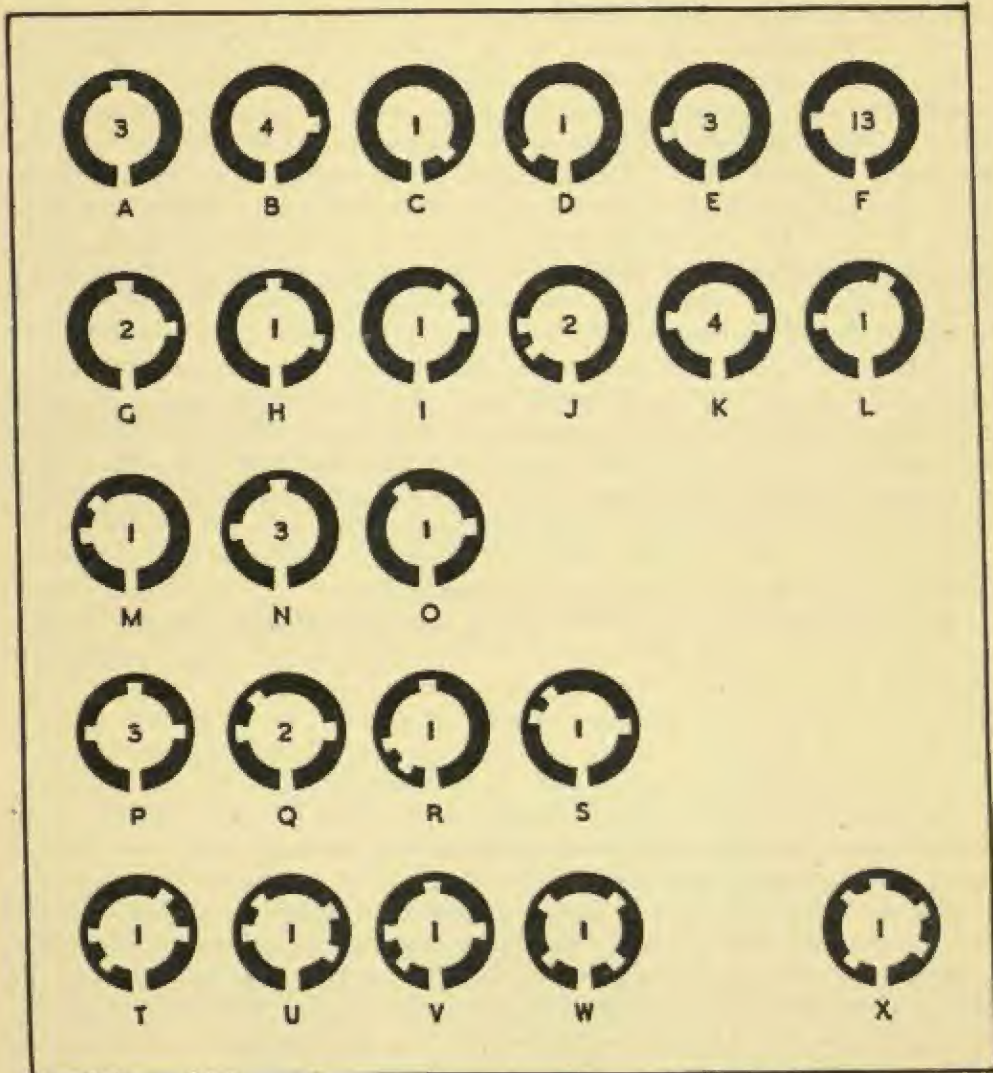


Fig. 2. Disposition of cell-entrances. The figure in the centre of each diagram indicates the number of cases in which the corresponding arrangement is found.

arrangement is found being indicated by the figure in the centre of the corresponding diagram. These diagrams and the inferences to be drawn from them are subject to a certain degree of inaccuracy, as a published description will often state simply that an entrance is "on the left,"

"opposite," or "on the right," and when such records are not accompanied by plans the reader is apt to interpret them more formally than the writer may have intended. This tendency may result in the exaggeration of the numbers of entrances given as in the "IX o'clock," "XII o'clock," and "III o'clock" positions.¹ Subject, however, to such errors as may arise from this cause, the figures suggest that, except in the case of diagram F, there is little to choose between one arrangement and another in respect of frequency of occurrence. That one-half of the twenty-five single entrances (A to F), and one-third of all the ninety-nine entrances considered, should occur in the "IX o'clock" position is, however, worth noting; and if a simpler comparison were made of all the single "left-hand" with all the single "right-hand" entrances, the resulting proportion of seventeen of the former to five of the latter would be even more striking. The preponderance of "left-hand" entrances is of course tied in with the common practice of placing the foot of the stair in this part of the circumference. To allude once more to Mousa, the arrangement of cells found there and represented by diagram P occurs in three cases only, Edinshall and the East Broch of Burray being the other two. The "III o'clock" position occurs twenty times and the "XII o'clock" position fifteen times, with the result that the "IX o'clock," "XII o'clock," and "III o'clock" positions, taken together, account for 67 per cent. of all the openings noted.

For basal galleries the evidence is at once less plentiful and less easy to interpret, owing to the difficulty of determining whether lengths of gallery observed in a ruinous structure are really fragments of an originally continuous gallery, or separate lengths of gallery, or even long, gallery-like cells. As a result of these uncertainties any classification is bound to be somewhat arbitrary, but, subject to this qualification, the material may be distributed among the several Regions as in Table IV—a distinction being made between galleries which are known to have been complete, *i.e.* continuous all round the circuit, those which may or may not have been complete, and those which are known to have been partial, whether associated with cells or not. A number of uncertain examples have had to be ignored altogether.

Scanty as they are, the figures in the table suffice to show that cells and basal galleries are not, as is sometimes thought, regular alternative features; basal galleries are, in fact, a much less common arrangement. They further suggest that basal galleries, whether complete or partial, were chiefly in favour in the Inner and Outer Islands, where fifteen out of a total of twenty-five examples occur—a point to which attention has already been drawn by the Royal Commission on Ancient Monuments.² Of the galleries known to have embraced the whole circuit of the court, the one at Gurness was entered at either end from one or other of the guard-cells; the one at Mid

¹ In the diagrams the broch-entrance is placed in the position of VI on the clock-face.

² *Inventory of the Outer Hebrides, Skye and the Small Isles*, p. xxviii.

TABLE IV.—BASAL GALLERIES.

Region.	Galleries known to be complete.	Galleries which may or may not be complete.	Partial galleries, with or without cells.	Totals.
I. Shetland	1	2	1	4
II. Orkney	3	..	1	4
III. Northern Mainland .	..	1	1	2
IV. West Coast and Inner Islands	1	4	4	9
V. Outer Islands . . .	..	1	5	6
VI. Central and Eastern Mainland . . . .	..	..	..	..
Totals	5	8	12	25

Howe ran from the end of one guard-cell not quite as far as the other, and could also be entered by an opening from the court slightly above ground-level; the one at Redland has been demolished, and no details are known except that an "encircling gallery" was found by the excavators; for Houbie we are dependent on Low's plan,¹ which shows the gallery in a diagrammatic style; and for Kingsburgh details are likewise lacking, but the gallery was entered from the court in the "II o'clock" position.

It is perhaps worth noting, in conclusion, that three of the foregoing five brochs appear to have lacked stability—Gurness fell down at an early stage in its history;² one sector of Mid Howe had to be buttressed and thickened, and the basal gallery filled up;³ while Redland had to be propped up with an outer facing-wall, though not apparently until long after its first

¹ *A Tour through the Islands of Orkney and Schelland*, p. 109.

² R.C.A.M., *Inventory of Orkney*, No. 263.

³ *Ibid.*, No. 553.

construction.¹ If, therefore, the Royal Commission on Ancient Monuments is right in suggesting² that the hollow wall may have been a structural device rather than a provision for sheltering the broch's inhabitants,³ the inference might possibly be drawn that the device proved to be a bad one when used in the basal storey, and that the comparative rarity of complete basal galleries was due to a timely recognition of this fact by builders.

(iv) *Upper Galleries and Stairs*.—The upper storeys of nearly all the brochs have suffered so much damage that our knowledge of the galleries and stairs that they once contained,⁴ as well as of the other features originally existing in the upper parts of the walls, has necessarily to be inferred from comparatively few examples, as shown in Table V.

TABLE V.—SURVIVAL OF UPPER GALLERIES.

Highest storey of which any traces survive, not counting ground-floor .	1st	2nd	3rd	4th	5th	6th	Total
Number of brochs . . .	23	1	3	..	1	1	29

Actually the material is even scantier than the table suggests, as fewer than half of the examples in the lowest class provide any useful evidence. We really depend on the following structures alone: Mousa (to 6th floor), Dun Telve (to 5th), Dun Carloway and Dun Troddan (to 3rd), Clickhimin (to 2nd), and Burray (E.), Carrol, Caisteal Grugaig, Dun Cromore, Knowe o' Burristae, Levenwick, Loch an Duna, Mid Howe, and Yarrowes (to 1st). Our present-day accounts of Dun Telve⁵ and Dun Troddan⁶ can, however, be eked out with the descriptions recorded by Gordon in 1720⁷ and by Pennant in 1772,⁸ from which some facts—or at least some strong probabilities—can be extracted by critical reading.⁹

The comparatively perfect condition of the Broch of Mousa and the frequency with which it has been described combine to create the impression that its arrangements constitute the norm, any divergences from which are to be classed as exceptional. It is true that at Mousa the stair does not

¹ R.C.A.M., *Inventory of Orkney*, No. 320.

² *Inventory of the Outer Hebrides, etc.*, p. xxxix.

³ On which point see also p. 71.

⁴ The reasons for believing that all brochs originally stood high enough to contain several galleries are considered on pp. 80 ff.

⁵ *P.S.A.S.*, vol. I. pp. 241 ff.

⁶ *Ibid.*, vol. IV. pp. 83 ff.

⁷ *Itinerarium Septentrionale*, pp. 166 f.

⁸ *A Tour of Scotland*, vol. II. pp. 339 ff.

⁹ The special importance of these accounts in their bearing on the former height of the towers will appear when this subject is discussed in Section 4 (iii).

begin on the ground but in the first-floor gallery, while other stairs beginning markedly above the ground are noted in only six other cases;¹ but, in so far as the main constructional features are concerned, a single stair rising regularly² to the top through a series of galleries which remain, even at the top, large enough to serve for passage³ is ordinarily accepted as typical of brochs as a class. The rest of the evidence can consequently be best studied by means of comparisons with Mousa.

A first point of divergence occurs at Dun Telve and Dun Carloway. It has been suggested⁴ that the rough condition of the inside of the Mousa galleries, which is paralleled in a single length of passage at Clickhimin,⁵ points to their not having been intended for use as passages;⁶ but however this may be, the galleries, as has been said, are in fact large enough for such use. At the same time they do not show a regular diminution in size from below upwards, as the first gallery has the least headroom of all, and the fourth and fifth are both narrower, in places, than the sixth. At Dun Carloway and Dun Telve, however, different conditions obtain. At Dun Carloway the batter of the outer wall is so pronounced that while the first gallery is 2 feet 6 inches wide at the level of its floor, the third measures only 12 inches and 8 inches in width at floor and roof respectively. The third gallery is also obstructed by two bonding-slabs which span it at about half its height. Similarly at Dun Telve, the intra-mural space narrows markedly between the floor of the first gallery, which is 2 feet 6 inches broad, and the roof of the second, which is only 1 foot 6 inches.⁷ The second gallery is still large enough to have been used as a passage, and the faces of both are neatly finished, but the upper three galleries are only about 12 inches wide and have their inner faces rough—facts which suggest that the galleries above the second were not meant for ordinary use but were primarily structural features. And while Gordon's statement that the walls "closed" at the top of the fourth gallery at Dun Troddan, just as they "joined together" at the top of Dun Telve, is very unlikely to be true seeing that the third gallery is to-day over 2 feet wide at about half its height,⁸ it does suggest that the vanished portion of this tower must, like

¹ Clickhimin in Shetland; Burrian (Russland), Gurness, and Mid Howe in Orkney; Carrol in Sutherland; Wester Broch in Caithness.

² The sections appearing in R.C.A.M., *Inventory of Shetland*, figs. 533 and 534, show that neither of the two minor landings that do in fact interrupt the even rise of the stair is more than about 4 feet in length.

³ They actually vary in breadth from 1 foot 6 inches to 3 feet 6 inches, and in height from 4 feet to 5 feet 6 inches.

⁴ R.C.A.M., *Inventory of Orkney and Shetland*, vol. i. p. 33.

⁵ R.C.A.M., *Inventory of Shetland*, p. 70.

⁶ *Ibid.*, p. 52.

⁷ *P.S.A.S.*, vol. i. p. 247. The photograph on p. 249 shows how noticeable the contraction is in the second gallery.

⁸ *P.S.A.S.*, vol. iv. p. 86, fig. 3. But the debris of a ruined fifth gallery piled on the lintels of a considerably narrowed fourth might well create this impression in an inexperienced observer's mind. On this question see also p. 81.

the upper galleries of Dun Telve and Dun Carloway, have been very difficult of access. From all this it seems to emerge that the upper galleries at Mousa, notwithstanding their internal roughness, lend themselves to use as passages in a way that those at the other three brochs do not; and a question consequently arises as to whether this difference is something more than an accident, and actually marks a distinction between two different varieties of structure.

A subsidiary but connected problem may be mentioned here. Gordon states that at Dun Troddan the stair went "to the top," but he does not explain how it was carried through the continually narrowing galleries—let alone out on to the wall-head above the supposed convergence of the walls. This could perhaps have been provided for by a local widening of the intra-mural space along the spirally ascending course of the stair; or else we must suppose that, notwithstanding Gordon, the stair actually ended somewhere much lower than the wall-head and that its functions were taken on by a ladder or wooden steps affixed to the face of the wall. The difficulty suggests a further distinction from Mousa, where it would presumably not have arisen, resulting from the difference in the treatment of the upper galleries that has been mentioned in the preceding paragraphs.

A third point of difference between the Broch of Mousa and certain other examples is perhaps to be seen in the logical simplicity of the former's structural arrangements. At Mousa all parts of the intra-mural space are immediately accessible from the stair, the galleries being open and unobstructed. Some other brochs, however, are designed in a less straightforward manner. At Dun Telve, for example, the first gallery is blocked off by a solid wall from the space above the entrance-passage, its terminal portion being also divided from the remainder by transverse slabs and having to be entered from the gallery above by two openings in its roof. At Mid Howe, although the arrangements have been obscured by dilapidation, there seems to have been a kind of entresol gallery in the south-south-east sector, intermediate between the ground-floor and first-floor galleries. At Dun Carloway, in Thomas's time, the second gallery, or according to his numbering the third, seems to have been stopped by a sloping wall of transverse lintels, which he mistook for a blocked stair,¹ instead of opening on to the back of the stair as at Mousa; the third gallery is also barred by two slabs extending across it. At Dun Cromore Thomas appears to have found an inaccessible space between the under-side of the stair and the sloping, lintelled end-wall of one of the guard-cells²—unless, indeed, this end-wall was in fact, as he stated it to be, a flight of stairs descending from the first-floor gallery. At Dun Baravat he noted even more complicated arrangements,³ but these need not be dealt with here as Dun Baravat is

¹ *Arch. Scot.*, vol. v. p. 385.

² *Ibid.*, vol. v. pp. 391 f. and pl. xlviii.

³ *Ibid.*, vol. v. p. 380 and pl. xlix.

listed as a "probable" broch only.¹ At Levenwick, at Dun Troddan, and at Caisteal Grugaig the stair does not rise steadily, as it does at Mousa, but it is interrupted by a level stretch of gallery at first-floor level; while at Caisteal Grugaig, further, a section of the first-floor gallery must have been blind at either end, one being under the stair and the other blocked by a chamber overlying the entrance-passage. Finally at Clickhimin the arrangements are entirely abnormal, being correlated with the exceptional system of entrances. Here a stair rises from a passage which pierces the north-west sector 5 feet above the level of the court and leads out through one of the two subsidiary entrances; while from the other subsidiary entrance, in the north-east sector, a passage slopes gradually upwards, levels off into a gallery, and ultimately opens on the back of the stair above the passage in the north-west sector.

As providing another important variation of the arrangement familiar at Mousa, attention must be called to four brochs, all in Caithness, which possess two stairs, one on either side of the court. The fact that, in three of these cases (Brounaban, Keiss Road, and Keiss), one of the stairs rises from beside a duplicated entrance has raised a doubt as to whether both stairs are primary in all or any of these structures. A re-examination of the sites, made in 1946, cast no fresh light on this question; but as the insertion of a secondary stair in a standing broch would seem to be technically impossible, it is safe to assume that both stairs are primary in every case—the more so as a double stair is in itself a very reasonable arrangement. Thus ample evidence exists to show that the supposed "norm" of Mousa was in fact frequently varied, and to give grounds for believing that brochs were less fully standardised, at least in matters of detail, than may appear from summary descriptions. There is no good reason, however, for supposing that a broch was ever constructed without any stair at all, as a stair was necessary not only for access to the wall-head but also, most probably, for the supply of stone to the builders during the process of construction.² Nor can the absence of stair-treads from the ruins of a broch be regarded as negative evidence, in view of the ease with which these can be destroyed, or covered up by debris.³

To conclude this section something must be said as to how the bases of the stairs are disposed about the courts, and, as the base of the stair may be visible even in quite a ruinous broch, a fair number of examples are available. The figures are given in Table VI.

This table shows that by far the largest number of stairs—thirty-one

¹ The peculiar features noted by Thomas at Dun Cromore and Dun Baravat before 1890 were no longer visible when the officers of the R.C.A.M. visited these sites in 1921, but Thomas's descriptions and sketches are too positive to be ignored entirely. Compare his descriptions as referred to above with R.C.A.M., *Inventory of the Outer Hebrides, etc.*, Nos. 38 and 71 respectively.

² See R.C.A.M., *Inventory of Orkney and Shetland*, vol. I. p. 32.

³ E.g. at Brounaban, since the published plan was prepared.

TABLE VI.—DISPOSITION OF STAIR-BASES IN COURTS.

Region.	Positions of Stair-bases. (Entrance to broch is in "VI o'clock" position.)				Totals.
	Left VI-X.	Opposite X-II.	Right II-VI.	Left and Right.	
I. Shetland	1	1	1	..	3
II. Orkney	5	..	2	..	7
III. Northern Mainland .	14	1	2	1*	18
IV. West Coast and Inner Islands .	7	2	..	..	9
V. Outer Islands .	..	4	..	..	4
VI. Central and Eastern Mainland	4	..	..	..	4
Totals	31	8	5	1	45

* The three doubtful examples mentioned on p. 65 are omitted.

out of a total of forty-five—rise in the left-hand segment,¹ while the other two-thirds of the circuit contain less than half that number between them. And that this is due, in some degree, to the deliberate choice of the builder, and is not simply a result of the preponderance of "left-hand" cells that was noted above (p. 60), is shown by the fact that in fourteen of the thirty-one cases cells existed elsewhere than in the left-hand segment, from any of which the stairs could presumably have risen as easily as from a position between VI and X o'clock. It is possible that this arrangement was designed to expose the unshielded side of an intruder making his way to the opening at the foot of the stair. No further inferences can, however, be drawn with safety from the table, as the rest of the figures are too scanty.

¹ Between VI and X on the clock-face, the broch-entrance being at VI (*cf.* p. 60).

A final point of interest connected with the stairs is that, in seven cases out of the foregoing forty-five, the entrance to the stair is either at the level of the scarcement or, if below the scarcement, well above the level of the court. This is necessary at Gurness and Mid Howe, where the whole of the ground floor is occupied by a continuous gallery, and natural enough at Mousa, where the ground floor is a good deal taken up by large mural cells. At Burrian (Russland), again, the stair is so placed in the circuit that if it had started from ground-level it might have had difficulty in clearing the top of the right-hand guard-cell. At Clickhimin, Burray (E.), and Wester Broch, however, no reason for this arrangement suggests itself.

(v) *Scarcements*.—While it is naturally impossible to be certain that every broch originally possessed a scarcement, it is true to say that virtually no broch can be proved never to have had one at all. Possible exceptions are at Burrian, North Ronaldsay, where a peculiar but probably analogous arrangement exists (p. 68); at Yarrows, where the secondary reducing-wall does not in fact appear to have covered up a scarcement; and at Allt an Duin and Burness, where reducing-walls and scarcements seem to have been confused in the published descriptions. Apart from these cases, scarcements have been recorded in something like forty brochs and, while a number of others in which no scarcements have been noted still stand to a sufficient height for the scarcements to have been preserved, when these apparent negative examples are analysed it is found that in every case some circumstance exists which upsets their value as evidence. For example, the interior may be blocked with fallen masonry or the inner face may be masked by secondary building, while at Acharole the whole record is suspect. Scarcements must consequently be given an important place among the broch's constructional features.

Some details of twenty-four scarcements are forthcoming from twenty-two brochs, two of the brochs in question, Mousa and Dun Telve, possessing two scarcements apiece.¹ Gordon records an upper scarcement at Dun Troddan, and Pennant shows it in his engraving but in a position where it certainly does not exist; it is possible that he may have depicted it at too low an elevation, and that it was once carried on a part of the wall which has fallen since his time (p. 81), but it is also conceivable that Gordon confused the features of Dun Troddan and Dun Telve, and that Pennant followed him in transferring the latter's high-level scarcement to the former. The probability of an upper scarcement having existed at Dun an Ruigh Ruadh, perhaps some six feet above the existing one, is mentioned on p. 72. The commonest type of scarcement is probably an intake in the wall-face somewhat broadened by corbelling,² but the published accounts

¹ A ledge which appears about 12 feet above the ground in part of the circuit at Clickhimin (R.C.A.M., *Inventory of Shetland*, fig. 558) is not regarded as a true scarcement.

² I am indebted for this piece of information to Mr C. S. T. Calder.

do not always make this clear, as they frequently allude to an intake without further particularisation. Another arrangement, an intake with corbels set upon it at certain points, is found at Culswick, Mousa, Sallachaidh, and Ousedale Burn; at Culswick and Mousa the corbels are four in number, and are equally spaced out around the circuit, while at Sallachaidh corbels are found on two of the three surviving portions of the scarcement.

Consideration of the heights of scarcements is somewhat complicated by the fact that two occur at Mousa and at Dun Telve, as mentioned above, even if Dun Troddan be ignored; and also by some uncertainty as to the original ground-levels in unexcavated brochs. High-level scarcements like the one seen at Dun Telve may originally have existed in almost any broch except perhaps Dun Carloway, disappearing with the dilapidation of the upper parts in the manner already suggested in the possible case of Dun Troddan; comparisons will consequently be valid only as between the single scarcements and the lower members of the pairs.

The twenty-one scarcements that are available for this purpose range in height from 4 feet 6 inches at Clickhimin to 12 feet 6 inches at the Knowe o' Burristae; the largest number of examples (six) are in the 7-foot class and the average height is 8 feet. It seems unlikely that this average would be raised by more than perhaps a foot if the original floor-level was laid bare in every case. The examples are too few in number for valid comparisons to be made between the various Regions. The two scarcements at Mousa are 7 feet and 12 feet 4 inches high respectively, and thus seem to be in a different class from those at Dun Telve, which are at 6 feet 6 inches and 29 feet 6 inches respectively. If an upper scarcement ever existed at Dun Troddan it must have been more than 25 feet above the ground—the greatest height of the surviving part of the structure—and would consequently fall to be compared with the one at the neighbouring Dun Telve rather than with the one at Mousa.

The exceptional arrangement that was mentioned above as existing at Burrian, North Ronaldsay, has been described as follows: "At 3 feet above the floor is a scarcement 5 inches in depth, above which the wall is gradually intaken for a height of 4 feet 2 inches, and then projects abruptly for 4 inches, thereafter rising vertically."¹ This is clearly not the same thing as the scarcements described above, but its function, like theirs, may have been to provide a support for some construction projecting from the wall; it is possible, for example, to imagine the recessed zone of the wall-face as serving as an anchorage for struts or triangular trusses. If so, the height of the supported construction would have been rather more than 7 feet.

Any discussion of what structures the scarcements supported must

¹ R.C.A.M., *Inventory of Orkney*, No. 193.

proceed in the light of Dr A. O. Curle's report on his excavation of Dun Troddan, where he found a ring of post-holes roughly concentric with the wall-face and set some 6 feet within it.¹ Dr Curle was satisfied that the post-holes belonged to the broch's earliest period, and inferred that the posts supported the roof of a corridor encircling the court, the inner edge of which was borne by the scarcement on the wall-face. This conclusion, in fact, seems certain, and the corridor, which Dr Curle found reason for believing was divided from the court by a light partition, thus probably formed the inhabitants' ordinary dwelling-space, while also perhaps serving to obstruct the approach of intruders to cells and stair. But two important questions still remain to be considered. In the first place it may be asked whether the roof of the corridor was a roof and nothing more, or whether it also served as a balcony or gangway for traffic;² and in the second place whether the arrangement that obtained at Dun Troddan was necessarily the same in all brochs everywhere.

To the first question Dun Troddan itself provides no direct answer, but it is to be noted that the scarcement is only 6 feet above the ground, and that consequently a roof sloping down from it at even so gentle a pitch as 1 in 3 would leave headroom of little more than 4 feet on the side of the corridor towards the court. This point tells somewhat against the idea of a sloping veranda-roof though without disproving its existence; again, if the hypothesis of the broch being itself roofed is favourably regarded, the need for roofing the corridor appears less urgent. Some more positive evidence is forthcoming, however, from nine brochs³ in which doorways or large voids are found to open on to or just above the scarcements.⁴ These openings must pretty certainly have led not on to sloping roofs but on to horizontal balconies or stagings on which the inhabitants could live, or at least move about. Again, a veranda-roof at the height of the upper scarcement at Dun Telve (29 feet 6 inches) would not have been effective as a shelter; while at Mousa, where two scarcements occur within a few feet of one another, the lower one at least must have supported a balcony and not a roof. In this case, in fact, there would seem to have been two corridors set one above the other in much the same way as are the galleries within the broch-walls, and this analogy seems to increase the likelihood of the roofs of other corridors as well as having been available to the inhabitants for movement. Finally, at Cliekhimin, Mousa, and Mid Howe,

¹ *P.S.A.S.*, vol. iv. (1920-21), pp. 90 ff.

² That the structure carried on the low-level scarcement was a roof for the whole court, as suggested by Sir W. Lindsay Scott, D.S.C., F.S.A. (*Proceedings of the Prehistoric Society*, New Series, vol. xiii. p. 10), seems quite unlikely, as this theory makes no provision for the structural features discussed in the next paragraph.

³ Burray (E.), Burroughston, Caisteal Grugaig, Cliekhimin, Dun Telve, Gurness, Knowe o' Burristae, Mid Howe, Mousa.

⁴ At Mousa a doorway gives on to each of the scarcements. A third opens 4 feet 6 inches above the upper scarcement from a landing on the stair.

and perhaps elsewhere, there has been a space above the entrance-passage accessible only through the void by which its inner end opens on the court; if these spaces were put to any use they can only have been reached by ladders or from a balcony at scarcement-level, and of these two alternatives the latter seems to be preferable in view of the inconvenience of a ladder, as this would inevitably have obstructed the opening of the entrance-passage. There is thus good reason for supposing that the structure supported by the scarcement was often, if not always, something more than a simple roof for the corridor below.

For the second question, as to whether a gallery of the Dun Troddan type necessarily existed everywhere, a negative answer suggests itself, as some evidence can be quoted against the idea that the structure resting on the scarcement was invariably of the veranda type, whether sloping or flat. It is difficult, for example, to imagine that Dun Telve contained a high balcony supported on 30-foot poles; and if high-level scarcements are supposed to have been commonly constructed, we should be faced with the further difficulty of the supply of long timbers in the treeless regions of the north. On the other side can be set the fact that a scarcement's normal function is to support the ends of beams and, while timbers long enough to span a broch diametrically would have had to be as long as or longer than props for a high-level balcony, support for a balcony or partial floor could have been readily obtained by laying shorter timbers chord-wise round the circuit. Thus four timbers each about 21 feet 3 inches in length would have made a square framework within a broch 30 feet in diameter, the radial distance of their centres from the face of the wall being about 4 feet 5 inches. A six-sided or eight-sided frame could have been constructed of correspondingly shorter timbers. And evidence that frames of this kind were used at Mousa and at Culswick may perhaps be seen in the corbels set in the scarcements of these two structures—six at Mousa and four at Culswick—it being supposed that these corbels were principal supports on which the corners of the frame rested. The fact that no post-holes similar to those at Dun Troddan have been reported from any other brochs might be quoted as suggesting that supporting posts were, in fact, exceptional; but no dependence can be placed on such negative evidence seeing that (1) such a point would hardly have been noticed in the older excavations; (2) the only three brochs excavated since Dr Curle's discovery (Gurness, Mid Howe, and Kilmister) were full of secondary structures, in the building of which all evidence of an earlier circle of posts might well have been obliterated. Moreover, if the function of the Dun Troddan posts had been performed in these cases by stone supports, as might well have happened in a region where trees were rare, the masonry of their bases would almost certainly have been large enough to require demolition in order to clear the ground for the secondary structures.

(vi) *Voids*.—Examples of the characteristic window-like voids, either single or forming vertical flights, survive in more than twenty brochs. They were probably a regular feature of broch-architecture in general, and it is no doubt only on account of the dilapidation of the upper parts of the structures that many more examples are not on record. There seems to be no reason to question the usual theory that these voids were designed to reduce the weight on lintels; but in cases (*e.g.* Dun Telve, Dun Troddan, or Dun Carloway), where the flights of voids are not based on doorways leading into court or cells they may be supposed to have performed the function of lighting or giving access to the galleries—the latter, perhaps, by a ladder or wooden steps. The lowest member of a similar flight at Mousa is large enough to have been a door, and may have been approached by a ladder from a scarcement balcony 4 feet 6 inches below. This question possesses some interest as it bears on the function of the galleries; provision for lighting would indicate that some parts at least of the galleries were intended for use by the inhabitants and were not purely structural—as is also suggested by the distinction between rough and smooth finishing of the internal faces (p. 63).

Mousa alone shows the peculiar feature of a flight of dummy voids. A normal void occurs above the entrance of the stair, but from this there rises a flight of small aumbry-like hollows which do not penetrate the wall. These may be merely decorative, and it is difficult to suggest any practical purpose that they could have served unless, perhaps, to provide points of support, at varying heights, for timbers forming part of a roof (*infra*).

(vii) *Roofing and Wall-heads*.—Brochs are commonly supposed to have been completely open at the top, but this is hard to believe in view of the obvious desirability of excluding rain, wind, and enemy missiles¹—or at least of reducing the size of any aperture by which these could enter. The positive evidence for the existence of any kind of roof is, however, very meagre.² One item is forthcoming at Mousa, where it is on record that “the inner face of the wall of the lowest portion is vertical, while in the upper or galleried part the courses of masonry converge to some degree as they rise to the summit of the tower. The convergence is very marked in the uppermost 10 feet.”³ This convergence hardly appears in the published sections,⁴ but Mr G. P. H. Watson, who surveyed the building for the Royal Commission on Ancient Monuments, assures me that it is fully apparent to the eye at the level of the sixth gallery, and has shown me a sketch in his

¹ It should, however, be remembered that neither sling-stones nor arrow-heads have yet been reported among the relics found in excavated brochs.

² Bocca's comparison, quoted in *Arch. Scot.*, vol. v. p. 192, of two ancient buildings in Ross-shire, which were presumably brochs, to bells, can hardly be stretched to mean that low-pitched roofs, corresponding with the crowns of the bells, were present in his time. Ubaldini, writing sixty years later (1688) and pretty clearly referring to the same structures, states that they were open at the top (*ibid.*).

³ R.C.A.M., *Inventory of Shetland*, p. 50.

⁴ *Ibid.*, figs. 533, 534.

field-notebook which brings this out quite clearly. This convergence of the interior might be taken as suggesting that the tower ended in a false dome, formed by encorbellation, but something will be said shortly about the difficulties that attach to this theory. Evidence of similar convergence might also be held to exist at Dun an Ruigh Ruadh, where the inner face comes in markedly just above the scarcement; but, as the wall is broken down on its inner face to a height of 5 feet 9 inches above the scarcement, it is impossible to say whether the encorbellation was intended to support a false vault or merely to form an upper scarcement, perhaps some 6 feet above the existing one. The latter alternative, however, seems preferable in view of the low elevation—the ruined wall-head standing only 7 feet 9 inches above ground-level on the outside.¹

Another item comes from the Broch of Gurness, of which Mr J. S. Richardson, who conducted the excavations for H.M. Office of Works, has written as follows: "Owing to the bad quality of the stone and poor construction, a downward and outward thrust, presumably from a heavy roof, forced the walls outwards, causing the passages to be crushed and the upper part of the building to collapse."² He adds in a footnote that similar displacement occurs to a greater or less extent in some other broch towers—the one that he has particularly in mind being Mid Howe—and that the most reasonable explanation for it is pressure from a roof-construction;³ though he does not rule out the possible intervention of other contributory causes. It is probable that a roof of timbers covered with turf would have been heavy enough to produce the amount of thrust demanded by Mr Richardson's suggestion, particularly if the effect was enhanced by wind-pressure, or by poor construction which permitted movement; but the thrust developed by a massive masonry dome, such as is suggested by the signs of incipient contraction at Mousa, would naturally have been very much greater. In the absence of more definite evidence⁴ the question must remain an open one; but it is to be hoped that, when next a ruinous broch is explored, care will be taken to examine the fallen material, for the sake of elucidating the circumstances of the structure's collapse and of estimating the original nature of its upper portions.

On the supposition, however, that a massive false dome was a normal feature of all brochs, it is interesting to consider its probable size and features. That the dome, if it existed, was completely closed at the top is inherently most improbable, as this would imply that the whole of the interior of the tower was in permanent darkness, or at any rate received

¹ I am indebted for this information about Dun an Ruigh Ruadh to Mr C. S. T. Calder.

² R.C.A.M., *Inventory of Orkney*, p. 77.

³ *Ibid.*, p. 79.

⁴ The object depicted on Sueno's Stone, even if it is actually a broch, as has been suggested by Dr J. S. Richardson, throws no light on this point. Its top is flattish rather than domed or pointed, but the carving is too small and the stone too badly weathered to provide grounds for any inference.

no more daylight than could find its way in by the door—a proposition which will hardly accord with the known facts of the broch-builders' material culture even when allowance is made for the indifference of primitive people to the nuisance of smoke, and for the poor illumination tolerated, for example, in many mediæval buildings. On the other hand, a partial dome, which diminished the opening to a diameter of perhaps as little as 6 feet, would have allowed the inhabitants a reasonable amount of light¹—much more, at any rate, than the same area of void distributed among, say, seven small vertical windows arranged in a kind of clearstorey—while providing a most difficult target for high-angle archery, if archery was in fact practised by the brochs' inhabitants.²

The height and curvature of a false dome of the kind suggested would depend on the average length and thickness of the stones used in its construction—the length of face of the stones determining the amount of overhang or projection obtainable at each course and their thickness the corresponding rise. Professor Thomson has kindly undertaken the laborious calculations involved, and has found that, in theory, a false dome 15 feet in radius at the point of springing, and constructed of stones averaging 3 feet in length, could not be completely closed in less than about a hundred and seven courses, or reduced to an aperture 6 feet in diameter in less than a hundred and three.³

The foregoing dimensions were chosen as a kind of theoretical optimum, but Professor Thomson has also made a similar set of calculations to meet the special conditions obtaining at Mousa—a radius of 12 feet and an average stone only 2 feet in length.⁴ In this case it appears that theoretically the dome would not contract to a 6-foot aperture in less than about a hundred and fifty courses.

The rate of contraction in each case is given in Table VII.

If in the hypothetical case, where the diameter was 30 feet, the average stone was supposed to be 4 inches in thickness, the height to the apex would amount to 35 feet 8 inches, while the diameter would have decreased to 6 feet at a height of 34 feet 4 inches. At Mousa, however, the greater thickness of the average stone would give a height of at least 75 feet for the point of contraction to 6 feet. These heights, and particularly the one calculated for Mousa, are so great that they seem to rule out the possibility

¹ Mr G. P. H. Watson has pointed out to me that the Pantheon, which measures 142 feet 6 inches in internal diameter at ground-level and nearly 74 feet in height to the springing of the dome, is adequately lit by an aperture of this kind which is only 27 feet in diameter (Gwilt, *An Encyclopædia of Architecture* (1890), p. 916). An aperture of proportionate size in a 30-foot broch would be about 5 feet in diameter.

² These considerations naturally apply to any type of roof. In the case of timber construction, the apex could simply be left without its covering.

³ The amount by which the radius is reduced at each course is found by multiplying it by the cosine of half the angle subtended at the centre, in that course, by the average stone.

⁴ R.C.A.M., *Inventory of Shetland*, p. 49.

of masonry domes, even if contraction began well below the wall-head as has been suggested above; but before this inference is drawn a further possibility must be considered—namely that the rate of contraction may in fact have been more rapid than theoretical calculations suggest. It is assumed for the purposes of these calculations that the forward corners of

TABLE VII.—CONTRACTION OF FALSE DOMES.

No. of course above springing.	Hypothetical case: average stone 3 feet long. Radius (ft. ins.).	Broch of Mousa: average stone 2 feet long. Radius (ft. ins.).
0	15 0	12 0
5	14 8	
10	14 3	11 7
15	13 10	
20	13 5	11 2
25	13 0	
30	12 7	10 9
35	12 2	
40	11 9	10 3
45	11 3	
50	10 9	9 10
55	10 3	
60	9 9	9 4
65	9 2	
70	8 7	8 9
75	7 11	
80	7 3	8 3
85	6 6	
90	5 8	7 8
95	4 9	
100	3 9	7 0
105	2 5	
110	11	6 4
120		5 7
130		4 9
140		3 10
150		2 8

all stones are laid exactly flush with the faces of the stones in the course below, but in practice, if all the stones were properly locked so as to obviate any danger of movement, they might perhaps be laid with their corners slightly in advance of the stones in the underlying course, and this would naturally result in an accelerated rate of contraction. And it is a fact that some years ago a scale model was constructed by Mr A. Strachan, formerly

employed as a foreman mason on the preservation of brochs by H.M. Office of Works, in which the theoretical height of the dome was very materially reduced. Unfortunately the particulars of this model perished in a fire, but both Mr G. P. H. Watson and the late Professor R. G. Collingwood, who examined the model, were left with the impression that this method of roofing a broch might well have been fully practicable. On the other hand, the contraction noted at Mousa is certainly not of the same order as that exemplified by Mr Strachan's model; and as a dome on the lines of this model, with a possible height of some 25 feet or less, if superimposed on the original structure at Mousa, would have brought the total height of the building to something like 75 feet,¹ even this modified form of the theory of the masonry vault is still difficult to accept.

Again it may be said that if the dome were constructed of corbels set radially, not chord-wise, to the circumference of the tower, a considerably quicker rate of contraction could be obtained, though at the price of decreased stability and increased weight of material. But the surviving examples of false vaults—*e.g.* those of the mural cells—provide no evidence that the radial method of encorbellation was ever used in the brochs, and Mr Strachan is known to have adopted the "chord-wise" system in constructing his scale model. It is probably now too late to look for a solution of this problem, except in the unlikely event of roofing material being identified among the debris of a broch excavated on some future occasion; and in the meanwhile we can only rest on the obvious conclusion that a timber roof would have been very much lighter and easier to construct than any form of vault. A timber roof, pitched at an angle of 45 degrees, would have risen, at Mousa, only 15 feet above the wall-head, or 10 feet less than a vault of Mr Strachan's type.

However the tower was roofed, and whether it was roofed or not, it seems necessary to assume that it did not prevent access to the wall-head, as failing any provision for wall-head defence the most solidly constructed broch must ultimately have become a death-trap. In the absence of positive evidence we are naturally reduced to guess-work, but in the case of a tower which carried accessible galleries as high as the wall-head no actual difficulty of construction need be supposed to have existed. Thus if the tower were open at the top, or if a wooden roof rested on the inner part of the wall-head, the stair could have been carried out into a parapet-walk without any special measures having been necessary; while if the tower ended in a dome the walk could have been set on its haunch and the stair carried through the masonry mass in an ascending mural passage. This arrangement could hardly have been used in such cases as Dun Telve or Dun Carloway, where the upper galleries became too narrow for passage, but an alternative one has been suggested on p. 64.

¹ On the height of the original structure see p. 80.

(viii) *Wells and Tanks*.—Arrangements for the supply or storage of water have been reported in twenty-six places and, except as noted below, there is no reason to suspect that they do not belong to the primary period of habitation. Of the structures in question, thirteen are in the Northern Mainland, eleven are in Orkney, and two are in Shetland. Too much should not be made, however, of this apparent concentration in two regions, as a well or tank is unlikely to come to light unless a broch is cleared out to ground-level, and it is just in Caithness and Orkney that most so-called "excavation" has been done. Again, much of the underlying rock in these regions is at once easier to quarry and more suitable for slab-construction than the West Coast or Shetland formations.

The provisions made include covered well-chambers and cistern-like cavities, cut in the rock or partly cut and partly constructed of masonry, and on the surface slab-built tanks. Some brochs contain more than one of these types of construction. Eighteen of the wells or cisterns¹ have steps leading down to the water, while the remaining nine² have none. Mid Howe and Stackrue possess cavities which may not actually have been wells at all, but dry storehouses or cellars. The finest of the well-chambers of which a description has been published is the one at Gurness, where the bottom of the chamber, itself 8 feet high, is 14 feet below the surface, and the stair has nineteen steps. The largest cavity seems to be the one at Skirza Head, which measures 10 feet by 7 feet by 10 feet.³ Two wells (Burray (E.) and Netlater) were approached by short underground passages roofed with slabs. At Elsay and at Keiss a water-hole was placed within the thickness of the wall, at the foot of the stair, the one at Keiss being additional to a well close by in the court. The wells at Hillhead, Skirza Head, and Burray (E.) are all just outside the entrances, the steps leading down to the one at Hillhead opening within the outer door-checks of a prolongation of the entrance-passage in a way which may suggest a connection with external and perhaps secondary buildings. The method of access to the communicating underground passage at Burray (E.) is unknown, and consequently nothing can be said as to its primary or secondary character. Mention may also be made here of two shafts, some 5 feet apart and sunk respectively 11 feet 3 inches and 9 feet 2 inches into the ground, at the farm of Oust, Caithness,⁴ the former containing a steep stair and the latter seven

¹ In the following sixteen structures: Burray (E.), Burrian (N. Ronaldsay), Gurness, Hillhead, Hill of Works, Jarlshof, Keiss, Keiss Road, Kettleburn, Kintradwell, Loch of Ayre, Mamie Howe (an "uncertain example" not yet described), Ness, Netlater, Oxtro, Redland.

² In the following eight brochs: Burroughston, Carn Liath, Dunbeath, Elsay, Mousa, Nybster, Ousdale Burn, Skirza Head.

³ The so-called "Roman Bath" at Burghead is comparable with a broch cistern, measuring about 11 feet by 10 feet 8 inches by 4 feet 4 inches in depth (*P.S.A.S.*, vol. iv. pp. 351 f.); but the chamber in which it is set is larger and deeper than anything found at a broch, and the surrounding ledge is also without a parallel.

⁴ R.C.A.M., *Inventory of Caithness*, No. 455.

shelf-like steps projecting from one side. These may be on the site of a broch, but no other structure survives.

The slab-built tanks, as described in the published accounts, bear sufficient resemblance to other box-like constructions, found on sites belonging to various prehistoric periods, to suggest that they may in some cases be connected with secondary occupations of the brochs in question; eight,¹ however, may be noted as perhaps primary, of which one at least (Mid Howe) was found to be fed by a spring. In every broch in which these slab-built tanks occur there is also a well or cistern—or at Mid Howe the supposed dry cellar.

(ix) *Hearths*.—One or more large open hearths was probably a feature of the court of every broch, but so few brochs have been excavated with a proper regard for stratigraphy that primary and secondary hearths cannot usually be distinguished in the records. No useful discussion of this subject can therefore be undertaken at present.

4. SHAPE AND DIMENSIONS.

(i) *Ground-plan*.—Although broch towers are commonly said to be circular, a study of large-scale plans and of carefully prepared descriptions will show that the courts frequently measure rather more on one diameter than another, and that the even curve of the wall is sometimes broken by minor irregularities. The external outline, again, is liable to diverge from the circle to a greater degree than the inner, as the thickness of the walls is sometimes far from regular throughout the whole of the circumference.² A question may consequently be raised as to whether the normal ground-plan should be regarded as a circle or not.

This question may be answered in the affirmative, and for the following reasons. Internal diameters are on record for a total of one hundred and thirty-two brochs,³ and it is only in six of these cases that the major and minor axes diverge from the mean by as much as 6 per cent.⁴ The interiors of the great majority are thus so nearly round that a divergence from the true circle would hardly appear to the unaided eye. Again, it must be remembered that rough drystone walls, even when not purposely battered, will hardly ever present a truly vertical face—especially after suffering the vicissitudes of two thousand years—and that measurements taken at irregular heights above ground-level, as is often necessary on a site encumbered by debris, may well diverge materially from the true dimensions as

¹ In the following five brochs: Keiss Road, Mid Howe, Nybster, Ousedale Burn, Skirza Head.

² E.g. at Borwick, Burroughston, Camas an Duin, Cliekhimin, Kintradwell, Lamb Head, and Dun Torcuill.

³ Region I, 14; II, 16; III, 69; IV, 21; V, 6; VI, 6.

⁴ Camas an Duin, 13 per cent.; Dunrobin Wood, 10 per cent.; Dun Colbost and Edinshall, 8 per cent.; Dun na Maigh, 7 per cent., possibly as a result of reconstruction; Dun Cromore, 6 per cent.

laid out on the ground by the builder. It will consequently be quite safe to regard the normal broch-plan as a circle, and to make use of mean diameters in all cases except the six just mentioned. These may be treated as abnormal, and left out of the present discussion.

(ii) *Diameter*.—Although not always accurate for the reason that has just been given, the internal diameter is far more reliable than the outer as an index of the size of a broch, as the inner wall-face is not battered. Material divergence from the vertical is only shown where the wall-face recedes above a scarcement, to produce a slightly "cupped" effect when viewed in section, as in the cases of Mousa and Dun Telve.¹ The external diameter, however, is considerably affected by the batter of the outer face, and decreases as the rising wall decreases in thickness. Consequently, in the numerous cases in which the base of a tower is obscured by fallen stones and only the broken stumps can be seen above the debris, the outer diameter and wall-thickness can safely be assumed to be less by some unknown amount than they are at ground-level; whereas the internal diameter, notwithstanding its shortcomings, can be taken as sufficiently accurate for practical purposes.

The main facts concerning internal diameter, as observed in the approximately circular examples only, are shown in Table VIII. It must be noted that the exclusion from this table of the six examples (*supra*) which diverge markedly from the circular plan causes us to ignore the largest broch of all, namely Edinshall, which measures 60 feet by 51 feet, or 55 feet on the average.

It will be seen at once from this table that the diameters recorded vary somewhat from one region to another, and a question consequently arises as to whether these variations reflect real local differences in broch-construction or are merely accidental. In order to get some light on the mathematical aspect of this question I referred the detailed measurements to Professor Godfrey Thomson, who was kind enough to submit them to statistical analysis, and from his calculations the following facts emerge: (a) In respect of the standard deviation of the measurements within each Region, the Regions do not differ significantly even at the 1.0 per cent. point—that is to say, the difference that is actually found in the scatter of the measurements on either side of the mean might be expected to occur by chance sampling more often than once in a hundred times if no real difference existed. (b) In respect of their means, the six Regions do differ significantly, even at the 0.1 per cent. point—that is to say, on the hypothesis that there was really no difference between the Regions, the observed differences would occur by chance sampling less often than once in a thousand times. They should therefore not be regarded as samples of one "population." (c) Again

¹ Mousa is 19 feet in diameter at ground-level but expands to 24 feet above the cupping. The corresponding figures for Dun Telve are 32 feet and 35 feet.

in respect of their means, Regions I, II, and III, if grouped together, are found to be homogeneous in themselves, while Regions IV, V, and VI, similarly grouped, are likewise homogeneous in themselves, *i.e.* the apparent differences between the subdivisions of these groups are not significant even at the 5 per cent. point. (*d*) The difference in mean between these two groups of regions is significant at the 0.1 per cent. point, *i.e.* the northern district as a whole differs very significantly from the rest of Scotland. (*e*) Region II does not differ significantly from Region IV if compared with

TABLE VIII.—INTERNAL DIAMETERS.

Region.	No. of examples.	Internal diameters (feet).			Notes.
		Max.	Min.	Average.	
I.	14	35	19	29	* This measurement, which is fully authenticated, exceeds the next greatest in Region II by 8 feet.
II.	16	45*	27	32	
III.	67	44	20	30	
IV.	20	52†	28	35‡	† This measurement is recorded by Pennant and may be unreliable. The next greatest in Region IV is 42 feet.
V.	6	36	25	30	
VI.	4	40	30	34	
All Regions	127	52†	19	32	‡ Or 34 feet if Pennant's figure is ignored.

it alone, and if it is combined with Regions IV, V, and VI, the group so formed still differs significantly from Regions I and III grouped together. This suggests that, notwithstanding the undoubted homogeneity of Region II with Regions I and III, it may occupy something of an intermediate position between the groups having respectively large and small mean diameters.

Statistical analysis thus appears to suggest that we may have to deal with two different races or strains in the species broch; and although no corroborative evidence or plausible explanatory theory can be brought forward, the possibility should perhaps be remembered in future study.

Before passing on from the question of the mean diameter, it will be well to deal with a point which may appear open to criticism. It may be

said that the mean diameter of Region III is lowered through the influence of the nine brochs found within it that measure less than 25 feet, and that certain of these—actually seven in number—may not be fair samples seeing that they stand on artificially restricted sites such as narrow cliff-bound promontories, small islands, or the tops of hillocks.¹

But before any such argument could be admitted it would be necessary to test the whole of the material, and not only a single diameter-class in one district, for signs of artificial limitation; and this would be quite impossible on the strength of the published descriptions alone. Moreover, in the light of some further calculations it is seen to be quite unnecessary, as if the seven small brochs in question are ignored the following results appear: (i) the six regions still differ significantly, though now at the 1 per cent. point and no longer at the 0.1 per cent. point; (ii) no change is made in the comparison of Regions III and IV, as these still differ significantly at the 1 per cent. point as they did before; (iii) Region III, it is true, now no longer differs from the whole of the rest of the country even at the 5 per cent. point, whereas it did so previously at the 5 per cent. point and nearly at the 1 per cent. point; but in view of the comparatively low degree of significance this fact need not be accorded any great importance. Artificial limitation need therefore detain us no further.

(iii) *Height*.—The only four brochs that still stand to any considerable height—in part at least of their circumference—are Mousa, Dun Troddan, Dun Telve, and Dun Carloway, and it is consequently to these structures that we must look in the first instance for evidence regarding the original height of the towers. And it will be convenient to consider the question in terms of the wall-head only, ignoring the additional height to be allowed for a roof—supposing that any roof existed (pp. 71 ff.).

The Broch of Mousa is now 43 feet 6 inches high, and must have carried at least one more gallery or a parapet-walk. Quite possibly there was more than one additional storey of superstructure, but at least one must be assumed. The tower can therefore hardly have been less than 50 feet high to the wall-head in its pristine state, and may well have been higher. It is worth noting here that the figure of 50 feet would make the height of the tower the same as its external diameter at the base.

The surviving fragment of Dun Troddan shows two galleries intact and a third partially preserved. In its present state it is about 25 feet in height.² In 1720, however, when Gordon saw it,³ four galleries were intact; and as the additional gallery and a half may probably have added some 8 feet or 9 feet to to-day's figure, we arrive at 33 feet to 34 feet as the true height at that date. Gordon does, in fact, give the height as 33 feet, but it is clear

¹ See R.C.A.M., *Inventory of Caithness*, Nos. 33, 35, 203, 518; *Inventory of Sutherland*, Nos. 4, 25, 190.

² *P.S.A.S.*, vol. IV, p. 55.

³ *Itinerarium Septentrionale*, p. 106.

from his allusion to four internal doors leading into a gallery, as well as from his figure for the thickness of the wall at what seemed to him to be ground level, that in his time the ground inside the tower stood 6 feet above the true level of the court; and when the necessary correction is made the resulting total height of 38 feet is seen to be impossibly great, as the fourth gallery and the missing part of the third could never, between them, have accounted for a height of 14 feet. Nor is there, in fact, anything at all impossible in the idea that Gordon should have exaggerated this measurement by as much as 6 feet, seeing that he was most unlikely to have been properly equipped for measuring a building, and that the base of a ruined fifth gallery—unnoticed and consequently unmentioned—might possibly have added a foot or two to the total. The discrepancy consequently need not be regarded as important, and we are left with the inference that in 1720 Dun Troddan, with a height of 34 feet, was already reduced from its original height by an unknown but possibly quite considerable amount. That Gordon saw the inner and outer walls actually merging into one at an original wall-head seems quite improbable.¹

On the question of the vanished portion the six feet of debris collected in the court can perhaps throw some light. Theoretically this represents a volume of some 3700 cubic feet of piled stones, and on the purely arbitrary assumptions (a) that laid masonry would occupy half the space of random debris, (b) that the debris inside the tower represented the ruins of the inner wall alone, the outer wall being supposed to have fallen outwards, this volume would provide for an additional height of something under 7 feet. An unknown amount of stone-robbing must also no doubt be assumed. It would thus appear allowable to carry the tower up to an original height of over 40 feet, though it is impossible on the available evidence to say that it went no higher than this; and if the proportion of height to basal diameter was the same here as at Mousa, a height of some 60 feet might well have to be allowed for.

To Gordon's record Pennant adds little of value—the fourth gallery had disappeared by 1772, and he does not give any figure for the height of the third. His total height to the top of the third gallery is 24 feet 5 inches; and if this figure is corrected for the depth of the debris in the court, it accords fairly well with the conclusions reached above. His engraving² cannot be relied on, as he shows a high-level scarcement crossing a part of the wall-face which is still preserved and where no scarcement exists.

As regards Dun Telve, not only is Gordon's description regrettably short but his language raises the suspicion that he may have borrowed some of his points from Dun Troddan, then much better preserved than its neighbour, in the belief that the two structures were identical. In any

¹ Cf. p. 63.

² *Tour in Scotland*, vol. ii. p. 340 (4).

case even partial sense can be made of it only by assuming—what is not in itself unlikely—that in 1720 the lower parts of the tower were deeply buried in debris, and that Gordon entered by a hole¹ which led into the second gallery. The second gallery, at any rate, is the lowest level at which he could have made—as he alleges that he did—a complete circuit of the building within the wall-space, as the first gallery is barred at more than one point and there is no gallery on the ground floor. But while he gives no measurements, his drawing² evidently represents the same sector of the wall as still survives, and it can be usefully compared with the section prepared by H.M. Office of Works and published by Dr Curle.³ This comparison shows that whereas in 1720 three voids of the flight rising from over the entrance existed above the high-level scarcement, in 1916 the lowest of these voids was intact but the second had lost its lintel; the total height of the wall at this point must thus have decreased since 1720 by the height of one void plus some half-dozen courses of masonry—probably some 5 feet at most. On this showing the true height of this part of the broch in 1720 would have been about 38 feet. Pennant's illustration,⁴ though evidently taken from a sketch made on the spot, does not seem fully accurate in respect of these voids, but suggests none the less that very little height had been lost since 1720 in a vertical line above the door, though perhaps two or three feet from above the other long flight of voids (see fig. 3). This implies that the broch was about 35 feet high at its highest point in 1772; and although the figures stated in the text of Pennant's description⁵ give a height of 37 feet 6 inches, the lower estimate is probably to be preferred. In view of the fairly close correspondence of all these lines of reasoning, it is impossible to accept Pennant's estimate that the height had been reduced by as much as 10 feet 6 inches since the date of Gordon's visit, at least in this part of the circuit; though a robbery on the scale that he records may well have taken place elsewhere.

The evidence obtainable at Dun Telve thus shows that a tower from which a great deal of debris had already fallen was probably just under 40 feet high in 1720; and that at that height the intra-mural space had become so narrow that an inexperienced observer considered the walls to have "joined together." This is not to say, however, that the wall-head had been reached or that it was even particularly near; Gordon's illustration, while showing the faces of the walls as being very close together, does not

¹ A trace of what may have been this hole, now built up, can be clearly seen in one of Dr Curle's published photographs (*P.S.A.S.*, vol. I. p. 251, fig. 8) about 9 feet above the top of the entrance. Cf. also pp. 63, 65 on Cliekhimin.

² *Op. cit.*, pl. 65.

³ *P.S.A.S.*, vol. I. p. 245, fig. 4.

⁴ *Tour in Scotland*, pl. xli. (3).

⁵ *Ibid.*, pp. 337 f. He gives the height as 30 feet 6 inches, but his further figure for a wall-thickness of 7 feet 4 inches "taken at the distance of ten feet from the bottom" shows that the level of the ground inside the tower had been raised some 7 feet by accumulated debris.

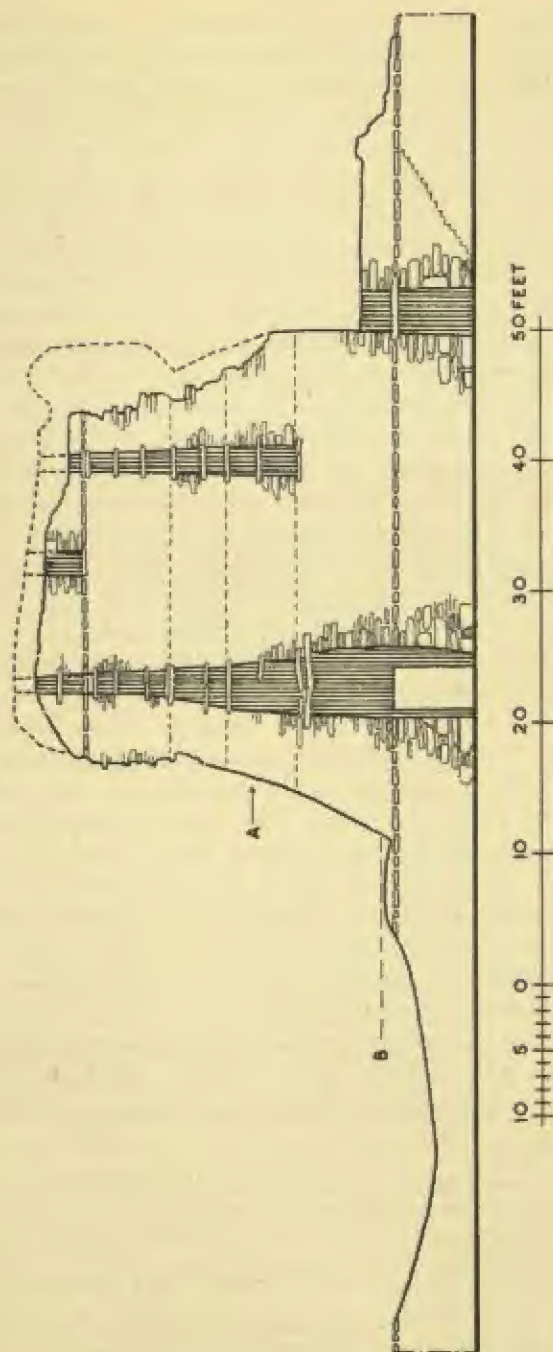


Fig. 3. Interior elevation of Dun Telve as in 1916, developed on the flat after H.M. Office of Works' elevation (*P.S.A.S.*, loc. cit.). Dotted outline indicates probable condition in 1772, after Pennant (*Tour in Scotland*, loc. cit.).

by any means indicate that they had actually been bonded into one. Moreover, if the proportion of height to diameter was the same as that observed at Mousa, the tower would have been at least 60 feet in height.

The facts relating to Dun Carloway can be better obtained from the account written by Thomas in 1861¹ than from that prepared by the Ancient Monuments Commission exactly sixty years later, as during this interval something like 11 feet seems to have fallen from the upper part of the wall and a piece of modern walling has been erected in its place at the level of the vanished fourth gallery.² As seen by Thomas, Dun Carloway in its highest part still showed four galleries and the outer wall of a fifth, as compared with the three now surviving; for this he gives a height of 34 feet, which compares well enough with the existing height of about 22 feet for the top of the third gallery. He does not believe that the original height was more than two or three feet in excess of the former figure; he gives no reasons for this opinion, but may have been led to it by the close convergence of the walls—these are now only 12 inches apart at the floor of the third gallery and 8 inches apart at its top, and he regards all the upper galleries as having been too narrow for access. This inference seems reasonable enough and, if it is accepted, we are left with a picture of a tower under rather than over 40 feet in height, and this on an external basal diameter of 47 feet. It would thus have been considerably lower than Mousa, and rather more squat in profile.

While the evidence so far reviewed suggests that brochs may have varied in height, and that in particular some may have been a good deal lower than Mousa, there is nothing to show that any one of them was low enough to be excluded from the class of "tower" in respect of its general proportions. It is theoretically possible to argue³ that the brochs now seen broken down to comparatively low heights never, in fact, attained to the proportions of towers, and that tower-like brochs were rare and exceptional structures. But against this suggestion both direct and indirect evidence can be brought. A passage in George Buchanan's *Rerum Scotticarum Historia*⁴ compares Arthur's O'on with "numerous" (*compluria*) structures then standing "in a certain island," stating that they are "rather bigger and more roomy" (*majuscula et laxiora*) than the O'on.⁵ These structures can only have been brochs, and to give grounds for the comparison

¹ *Arch. Scot.*, vol. v. pp. 383 ff.

² This modern walling is shown hatched in the section published by the Ancient Monuments Commission (*Inventory of the Outer Hebrides, etc.*, fig. 57), though without explanation in the text. But that this was the Commissioners' interpretation of the remains I am informed by Mr C. S. T. Calder, who prepared the published drawings.

³ As by Sir W. Lindsay Scott, D.S.C., F.S.A., in *P.P.S.*, New Series, vol. xiii. (1947), pp. .

⁴ Ed. 1582, fol. 6.

⁵ Aikman, in his English version of 1827, p. 24, gives "in the islands," which is an obvious mis-translation; and "more loosely constructed" for *laxiora*, for which again there seems to be little justification.

they must have shown a somewhat tower-like profile. We have thus direct evidence that a number of high-standing brochs, additional to those now known,¹ still existed in the sixteenth century. The indirect evidence is furnished by the lower storeys of all the broch ruins alike, and is even more compelling. The immensely wide and solid basal storey, combined with so ingenious an arrangement as the hollow, galleried wall for decreasing the volume of the stonework, points clearly to the fact that the wall was intended to be high,² and that the builders consequently saw need to reduce unnecessary weight and to provide for stability under the lateral pressure of wind, as well as to save material. And in connection with this latter factor it is well to point out that the broch method of construction will not effect any saving unless the wall is of more than moderate height, as several galleries are required to compensate for the massive size of the solid basal portion. Thus an ordinary solid wall 20 feet high by 7 feet and 5 feet in thickness at the base and the top respectively would be perfectly stable and also, probably, sufficient as an obstacle to escalade;³ but the section of this wall contains about 120 square feet, whereas the lowermost 20 feet of the Dun Carloway wall, if sectioned elsewhere than through the cell, gives a corresponding figure of about 140 square feet. It would therefore have been allowable, in the case of Dun Carloway, to infer that the height had been more than some 20 feet even if we had not known this to be the fact; and the argument is even more compelling in cases where the solid basal portion is higher and thicker.

Nor is it possible to explain away the thickness of the bases of broch walls by comparing them with other thick drystone walls, *e.g.* those of some of the great Irish forts. These latter may well have been intended to give space on their wall-heads for the deployment of a large force of defenders, with which tactic their easy, open stairs would have accorded very well indeed. But a defensive plan of this kind would have been quite unsuitable to a broch, with its narrow, awkward stairs and tortuous galleries. The analogy would be rather with the outer defensive works found at a number of brochs (pp. 87 ff.); the one at Mid Howe, for example, being up to 19 feet in thickness at its highest surviving level, is already unnecessarily massive if regarded as a barrier or as cover, while the extraordinary construction at Kilmster, originally 22 feet broad and subsequently thickened to a maximum of 40 feet,⁴ strongly suggests a vantage-ground for hand-to-hand fighting at the lip of the ditch.

The foregoing conclusions as to height, however, undoubtedly raise a

¹ To which may be added the vanished Dun Alascaig.

² That the principal purpose of the thick basal portion was not to accommodate cells is shown by the high proportion of brochs which contained one cell only (*supra*, p. 58).

³ Part of the prehistoric parapet remains, intact and unrestored, at the fort of Loch Doon, near Ardara, Co. Donegal. The wall is about 17 feet high.

⁴ I am indebted for this piece of information to Mr C. S. T. Calder, who excavated the remains of this broch in 1940, before they were swept away in the construction of an air-field.

difficulty in connection with the very large examples. Thus Edinshall, which is not round on plan, measures from 79 feet to 93 feet over all and from 51 feet to 60 feet internally across the court; and it is quite impossible to suggest that it ever showed the same proportions in profile as Mousa, with a height of 95 feet or more. The same might be said of Achaneas, with an external diameter of about 80 feet; or of Dun Bhorairaic, to which Pennant's measurements would give one of 76 feet;¹ or even of Torwoodlee, which closely approaches this figure. In such cases one is virtually bound to suppose that the brochs were high enough for the owners' purposes, whatever these were, but that their profiles were squat and not tower-like—thus Edinshall, if 40 feet high, would have had the same profile as a broch 26 feet high on a base 56 feet in external diameter. Apart, however, from these and other exceptional cases—and no doubt exceptions occurred from a variety of causes—there seems to be no good reason to suppose that the broch was not, in essence, a tower-like structure, and that it normally stood 40 feet or more in height to the wall-head.

It remains to consider for what purpose structures of tower-like proportions may have been built.

One important object in the builders' minds was no doubt defence against escalade—a danger perhaps increased by the roughness of the outer face of a drystone wall.² It is not at all clear, however, why the builders of the brochs should have taken, as it would thus appear, so much more serious a view of this particular hazard than the builders of ordinary forts, who were content with walls, again of drystone construction, of very much lower height—the more so as it can hardly be supposed that their enemies were equipped with regular scaling-ladders. While no general comparisons can properly be made on these lines owing to the influence of varying site-conditions on the practicability of scaling any individual structure, the difficulty remains, and prevents this explanation from appearing completely adequate. However, if the broch was the residence of a single family and not the stronghold of a community, its garrison would presumably have been smaller than that of a fort, and correspondingly stronger material defences might have been desired on this account.

It is likewise common to find brochs regarded as watch-towers, but this explanation of their height is again far from satisfactory. The terrain in Glen Beag (Glenelg) is such that the only view obtainable is one up and down the glen, and this would not have been materially improved by a rise of some 40 feet; while at Mousa a watchman on the hill behind the broch could have observed any movement on the sea with perfect safety to himself and would have had ample time to give the alarm. It is possible,

¹ On a recent visit Professor Childe found the diameter unmeasurable on account of fallen debris.

² Cf. the tradition of how Dun Carloway was scaled, with the help of two dirks used alternately as foot-holds (*Arch. Scot.*, vol. v. pp. 387 f.). The lower, battered portion of a broch wall is not, in fact, difficult to climb.

however, that on a site among rocks, gullies, and scrub-wood a tower might have given greatly improved observation into pockets of dead ground, besides the opportunity of searching such areas with a fire of arrows from the wall-head—supposing always that the bow and arrow was in use.¹ Indeed, were it not for the largely treeless condition of most of the broch country, one would certainly be led to suggest that the towers were designed to give a view over tree-tops. A high firing-platform, again, would no doubt help to increase the range of missiles, though simple wall-head defence against an assaulting rush would not in itself seem to call for an exceptionally high wall-head. None of the ordinary theories thus appear to carry conviction, and it is therefore perhaps not wholly fantastic to ask whether the height of the brochs may have been determined, or at any rate influenced, by other than material considerations. Magnificence in building is a common foible of wealthy and aristocratic societies, and the leading men of this northern Iron-Age community may conceivably have built their strongholds to an unnecessarily imposing height as a means of asserting their prestige.

5. EXTERNAL DEFENCES.

While something must be said about this subject, it can only be approached in a tentative manner for lack of reliable data. Conclusions regarding the quality and strength of external defences can hardly be based on such summary mention as these works are frequently accorded in the published accounts, which tend to be chiefly concerned with the structural remains of the brochs; while the fact that the observations have been made by numerous observers with no uniform set of criteria introduces further uncertainties. Again, artificial defences can hardly be considered apart from the natural defensive features of the sites on which they are constructed—no true comparison, for example, can be held to obtain between two brochs which are alike unprovided with artificial defences if one of them stands on open, accessible ground and the other on a sea-girt stack. The subject, in fact, requires a fresh approach, with appropriate comparative field-work, and failing this the existing data must be treated with a great deal of caution. In particular, mere lack of any mention of external defences in a given case should not be regarded as dependable negative evidence, seeing that so remarkable a system as the one at Gurness was only brought to light by the spade.

Subject to all these provisos, external defences are recorded as shown in Table IX.

On the figures in the table the following remarks may be made: (i) The totals (col. *d*) seem unexpectedly small, not only when stated as percentages of the total number of "certain" brochs, broch sites, and "uncertain

¹ On which *cf.* p. 71, note 1.

TABLE IX.—EXTERNAL DEFENCES.

Region. (a)	Particu- larly strong defences. (b)	Less strong defences. (c)	Totals (b) + (c) (d)	Totals (d) as percentage of Table I, cols. (b) + (d) totalled. (e)	Totals (d) as percentage of Table I, col. (e). (f)
I. Shetland	15	6	21	32 per cent.	22 per cent.
II. Orkney	7	10	17	20 ..	16 ..
III. Northern Mainland	7	31	38	18 ..	17 ..
IV. West Coast and Inner Islands	..	19	19	39 ..	39 ..
V. Outer Islands	..	4	4	Not calculated: see below.	
VI. Central and East- ern Mainland	3	..	3		
Totals	32	70	102		

examples" (col. *f*), but also when stated as percentages of "certain" brochs and "uncertain examples," without consideration of sites (col. *e*). While negative evidence—admittedly of doubtful validity—is exerting an influence here, as it were, by implication, and while the low figure for Orkney (col. *d*) must be suspect on the ground that it may be due in part at least to defective observations by early excavators as well, perhaps, as to extensive stone-robbery by farmers, it still seems clear that external defences are in fact less common, particularly in Shetland and Orkney, than the Ancient Monuments Commission suggests in its summing-up of the subject.¹ No valid conclusion can be based on the very few examples recorded in the Outer Islands except that external defences must be very rare in that region; while the figure for Region VI should be ignored until more is known of the relationship of the brochs in question to the works among which they stand.² (ii) Comparison of columns (*b*) and (*c*) shows a notable contrast

¹ R.C.A.M., *Inventory of Orkney and Shetland*, vol. i. p. 33.

² *Infra*, p. 90.

in the proportions of "particularly strong" and "less strong" defences in Regions I, II, III, and IV—the other two regions being again left out of consideration. While the figures have no doubt been influenced to some extent by the disturbing factors of which mention has been made above, there undoubtedly exists in Shetland a series of brochs heavily and elaborately defended by ramparts of earth or walls, and wide, deep ditches (*infra*). That "less strong" defences predominate in the Northern Mainland, and on the West Coast and Inner Islands, may also be taken as certain; their absence, or apparent absence, from the latter region being comparable with a similar blank in the Outer Islands. (iii) The figures for Region IV in cols. (e) and (f) are exaggerated in comparison with those for Regions I, II, and III by reason of the fact that no broch sites are recorded in Region IV. (iv) If Table IX is compared with the statistical conclusions given above under Section 4 (ii), no marked correspondence is found. It can only be said that "particularly strong" defences seem to be present in the northern group of Regions (I, II, and III) and absent from the southern group (IV, V, and VI), these groups also differing significantly in respect of their internal diameters (p. 79). However, in view of the comparatively small numbers of instances from Regions IV to VI that are shown in Table IX, this observation should not be regarded as establishing a fact but rather as pointing to a possible subject for study.

The main types of defensive outworks may be classified as follows:

(i) *Multiple Ramparts and Ditches*.—This type is magnificently exemplified by the complex laid bare at Gurness, where the defensive belt of three ramparts and three ditches must originally have measured at least 70 feet in width. With this system should no doubt be compared the Shetland examples just mentioned, though their details are still unexplored; in some of them the defences are drawn across a neck and do not encircle the broch, as they probably did at Gurness before the site became eroded. The most striking of the Shetland examples are at Hoga Ness, Burland, Sna Broch (Fetlar), and Underhoull.

(ii) *Walls and Ditches on Promontories*.—With the foregoing works link up the single walls, usually accompanied by ditches, that are frequently drawn across promontories or narrow necks. The massive wall at Mid Howe, 13 feet 6 inches to 19 feet in thickness, and with an outer ditch 9 feet wide and a narrower inner one, is the finest example of this type that has yet been excavated; but analogous though slighter walls may be seen at Nybster and Ness, and a ditch at Skirza Head.

(iii) *Encircling Walls*.—Clickhimin shows the best example of a simple encircling wall; this runs round the former shore-line of the islet on which the broch is built and averages 10 feet in thickness. At Jarlshof part of a thinner wall survives, and unexcavated traces of similar encircling walls occur at many sites in various localities. The great wall of enceinte at

Edinshall cannot at present be placed in this class with certainty, as its connection with the broch, though quite probable, is unproved; and even less can be said of the superficially similar cases of The Laws and Torwoodlee.

(iv) *Foreworks*.—A final word must be said about the forework at Clickhimin, an internal gatehouse set within the wall of enceinte and spanning the passage that leads to the door of the broch through a complex of external buildings. No other such forework is known to be connected with a broch, but it invites comparison with the gateway in the wall that surrounds an island in the Loch of Huxter (Whalsay),¹ and with the totally detached building that stands within an outer defence of ditch and bank near the point of the Ness of Burgi.²

6. RECAPITULATION.

The chief points made in this paper may be summarised as follows:

The facts of *distribution and typology* cannot safely be used as evidence for the broch's place of origin. The large total *number* indicates the former importance of the broch as a social factor, but there is no reason to suppose that all brochs were in use at once. Among the architectural features, *entrances* follow the "normal" plan except in a very few cases. The supposed "normal" arrangement of *guard-cells* (one on each side of the entrance) occurs in only 21 per cent. of the cases noted; a single cell occurs in 52 per cent., "right-hand" outnumbering "left-hand" cells by more than three to one; no cell at all is present in 26 per cent. The arrangement of three *mural cells* ("right," "left," and "opposite") made familiar by Mousa is likewise not normal, as three cell-entrances are found in only 13 per cent. of the cases, while one cell-entrance occurs in 47 per cent., two in 30 per cent., and more than three in 10 per cent. "Left-hand" cell-entrances preponderate. Complete *basal galleries* are much less common than cells, and occur mainly in the Inner and Outer Islands. In respect of *upper galleries and stairs* Mousa, which is commonly regarded as the norm, differs from the three other least ruinous brochs in various ways which cannot be resumed summarily. A second stair exists in four cases. Of the stair-entrances 69 per cent. are on the "left-hand" side of the court. Veranda-roofs resting on low-level *scarcements* probably served also as balconies; high-level scarcements (only one preserved) may have supported some roof-structure. *Voids*, besides relieving lintels, may in some cases have given access to galleries from balconies. Theoretical considerations are against *roofs* of towers, if present, having been masonry vaults, though some experimental evidence for this exists. Elaborate arrangements for *water-supply* are made in many cases. Statistical study of *mean internal diameters* shows

¹ R.C.A.M., *Inventory of Shetland*, No. 1316.

² *Ibid.*, No. 1154.

that the northern district (Shetland, Orkney, Caithness, Sutherland) differs significantly from the rest of the country in this respect. In *height* brochs probably varied, some being lower than Mousa and more squat in profile; but there is no reason to believe that any were too low to be characterised as towers. Several explanations can be suggested for their height but none is completely convincing. Very strong *external defences* seem to be commonest in Shetland (15 out of total 32).

APPENDIX.

LIST OF BROCHS, BROCH SITES, AND CERTAIN COMPARABLE STRUCTURES.

The following list contains five hundred and fifty items, as follows: (i) Three hundred and four structures which have been positively identified as brochs and are still in existence. For those printed in italics no dimensions or structural features are on record. (ii) Sixty-seven sites of vanished structures which are recorded as brochs. These are listed as "broch sites." In a few cases descriptions exist. (iii) One hundred and forty-one structures which probably are or possibly may be brochs, but which have not been positively identified as such. These are listed as "uncertain examples." (iv) Thirty-eight "comparable structures." These are not brochs, but they embody features which appear in broch architecture.

The material is arranged under the six regional headings adopted in the body of the paper, namely Shetland, Orkney, Northern Mainland,¹ West Coast² and Inner Islands, Outer Islands, and Central and Eastern Mainland (*cf.* fig. 1). The county, island, or district in which each broch stands is noted, and a reference is given to the principal source from which information regarding it has been obtained. In the case of brochs surveyed by the Royal Commission on the Ancient and Historical Monuments of Scotland, this reference takes the form of the structure's serial number in the appropriate County Inventory.

I. SHETLAND.

All numbers refer to the Royal Commission's Inventory of Orkney and Shetland.

BROCHS.	
<i>Aithsetter</i> , 1141.	Burland, 1247.
Balta, 1596.	Burra Ness, 1716.
Brough Holm, 1548.	Burraland, 1143.
<i>Burga Water</i> , 1606.	Burraland, 1607.
Burgar Stack, 1544.	Burravoe, 1114.
	Clevigarth, 1147.

¹ North of a line joining Tain and Gruinard.

² From Gruinard to Kirkeudbright.

I. SHETLAND (*contd.*).BROCHS (*contd.*).

Clickhimin, 1246.
 Clumlie, 1145.
 Culswick, 1397.
 Dalsetter, 1146.
East Burra Firth, 1395.
 Eastshore, 1148.
 Feal, 1211.
Footabrough, 1608.
 Fugla Ness, 1115.
 Gossabrough, 1718.
 Greenbank, 1715.
 Hamnavoe, 1353.
Hawk's Ness, 1500.
Head of Brough, 1721.
 Hoga Ness, 1545.
 Holm of Copister, 1720.
 Houbie, 1212.
Houlland, 1396.
Housabister, 1282.
 Infield, 1116.
Islesburgh, 1354.
 Jarlshof, 1149.
 Levenwick, 1144.
 Loch of Houlland, 1352.
 Loch of Huxter, 1605.
Loch of Kettlester, 1719.
 Loch of Watsness, 1609.
 Mousa, 1206.
 Noss Sound, 1085.
Nounsburgh, 1394.
 Sna Broch, Fetlar, 1210.
 Sna Broch, Unst, 1546.
 Southvoe, 1142.
 Staal, 1717.
 Underhoull, 1547.
Wadbister Ness, 1499.
 West Burra Firth, 1393.
West Houlland, 1398.
West Sandwick, 1722.
 Windhouse, 1723.

BROCH SITES.

Aith, 1106.
 Baliasta, 1579.
 Barra Holm, 1529.
 Brei Wick, 1744.

Brough, 1107.
 Brough, 1277.
 Brough, 1343.
 Brough Lodge, 1238.
 Brough Taing, 1580.
 Burgan, 1386.
 Burland, 1535.
 Burra Voe, 1384.
 Burrastow, 1673.
 Burravoe, 1745.
 Burrian, 1308.
 Burwick, 1528.
 Heogan, 1105.
 Houllands, 1468.
 Knowe of Houlland, 1188.
 Loch of Burraland, 1387.
 Loch of Stavaness, 1307.
 Mail, 1187.
 Musselburgh, 1582.
 Orbister, 1385.
 Sand Wick, 1581.
 Scousburgh, 1190.
 Stoura Brough, 1674.
 Sumburgh Head, 1189.
 Symbister, 1342.
 Vidlin, 1306.

UNCERTAIN EXAMPLES.

Boust, 1610.
 Brindister, 1399.
 Burga Water, 1284.
 Cullingsburgh, 1086.
 Fethaland, 1355.
 Gord, 1150.
 Heglibister, 1501.
 Loch of Benston, 1283.
 Loch of Brindister, 1248.
 Loch of Brow, 1153.
 Lunabister, 1152.
 Pinhoulland, 1611.
 Skelberry, 1151.
 Wester Skeld, 1400.

COMPARABLE STRUCTURES.

Loch of Huxter, 1316.
 Ness of Burgi, 1154.

II. ORKNEY.

All numbers refer to the Royal Commission's Inventory of Orkney and Shetland.

BROCHS.

Berstone, 405.
Borwick, 679.
Braebuster, 624.
Breckness, 920.
Burgar, 261.
Burness, 321.
Burray (East), 862.
Burray (West), 861.
Burrian, Corrigal, 12.
Burrian, N. Ronaldsay, 193.
Burrian, Russland, 14.
Burroughston, 778.
Burwick, 817.
Castle of Bothican, 522.
Dingieshowe, 625.
Green Hill, 379.
Gurness, 263.
Helliar Holm, 806.
Hillock of Breckna, 486.
Howe of Hoxa, 815.
Hunda, 863.
Ingshowe, 322.
Knove of Burrian, 551.
Knove of Burristae, 1034.
Knove of Dishero, 265.
Knove of Stenso, 262.
Lamb Head, 947.
Lingro, 406.
Loch of Ayre, 360.
Loch of Clumly, 678.
Mid Howe, 553.
Ness of Ork, 777.
Ness of Woodwick, 264.
Netlater, 13.
Oxtro, 11.
Point of Buryan, 437.
Skogar, 16.
Steiro, 779.
Taft, 15.
Verron, 260.
Westside, 552.
Wasso, 438.

BROCH SITES.

Arion, 939.
Brough, 851.
Burrowstone, 1023.

Colli Ness, 473.
Dennis Ness, 205.
Harra, 852.
Harray Church, 138.
Hoor Ness, 1071.
Hunton, 980.
Knoll of Skulzie, 1072.
Loch of Westhill, 801.
Overbrough, 139.
Redland, 320. A description of the structure of this broch is on record.
Scar, 182.
Scockness, 606.
Smiddybanks, 850.
Stackrue, 677. A description of the structure of this broch is on record.
Stromness, 940.
Tofts, 430.
Westbrough, 183.

UNCERTAIN EXAMPLES.

Backaskaill, 159.
Braebister, 380.
Burrian, Garth, 21.
Burrian, Loch of Harray, 680.
Cantick, 1006.
Cummi Howe, 872.
Deerness Church, 629.
Finstown, 323.
Green Hill of Hesti Geo, 1008.
Green Hill, Stronsay, 948.
Green Hill, Walls, 1007.
Hall of Rendall, 270.
Hillock of Baywest, 949.
Hodgalee, 1035.
How Farm, 158.
Howan, 20.
Howe of Langskaill, 627.
Kirk of Cleaton, 23.
Knove of Gullow, 22.
Knove of Hunclett, 555.
Knove of Ryo, 267.
Loch of Hundland, 18.
Loch of Isbister, 17.
Mamie Howe; information from Mr J. S. Richardson.
Mithouse, 19.
Nebister, 160.

II. ORKNEY (*contd.*).UNCERTAIN EXAMPLES (*contd.*).

Ness of Boray, 313.	Tankerness, 626.
Newark, 439.	The Howe, 921.
North Howe, 557.	The Skeo, 1009.
Riggan of Kami, 628.	Tingwall, 268.
St Mary's Kirk, 24.	Verron, 682.
St Tredwell's Chapel, 523.	Viera Lodge, 556.
Scarrataing, 681.	Vinquin, 266.
Scockness, 554.	Wass Wick, 269.
	Weems Castle, 816.

III. NORTHERN MAINLAND.

Numbers refer to the Royal Commission's Inventories of Caithness (abbr. C.) and of Sutherland (abbr. S.).

BROCHS.

<i>Achanarras</i> , C. 99.	<i>Brounaban</i> , C. 511.
<i>Achaneas</i> , S. 59.	<i>Bruan</i> , C. 193.
<i>Achaneas</i> , S. 51.	<i>Burg Langwell</i> , C. 201.
<i>Acharole</i> , C. 466.	<i>Burg Ruadh</i> , C. 207.
<i>Achavar</i> , C. 199.	<i>Burn of Latheronscheel</i> , C. 212.
<i>Achbuitigan Tulloch</i> , C. 350.	<i>Camas an Duin</i> , S. 157.
<i>Achcoillenaborgie</i> , S. 183.	<i>Camster</i> , C. 189.
<i>Achies</i> , C. 98.	<i>Camster</i> , C. 522.
<i>Achingale</i> , C. 473.	<i>Carn Bran</i> , S. 468.
<i>Achlochan Moss</i> , C. 102.	<i>Carn Liath</i> , S. 187.
<i>Achorn</i> , C. 214.	<i>Carn Liath</i> , S. 270.
<i>Achow</i> , C. 208.	<i>Carn Mor</i> , S. 53.
<i>Achunabust</i> , C. 351.	<i>Carn na Mairg</i> , C. 105.
<i>Achvarasdal Lodge</i> , C. 353.	<i>Carrol</i> , S. 27.
<i>Achvarn</i> , C. 112.	<i>Castle Cole</i> , S. 25.
<i>Allt a' Choire Mhoir</i> , S. 312.	<i>Castlehill</i> , C. 329.
<i>Allt an Duin</i> , S. 182.	<i>Clachtoll</i> , S. 7.
<i>Allt an Duin</i> , S. 313.	<i>Cnoc Donn</i> , C. 103.
<i>Allt Breac</i> , S. 395.	<i>Coghill</i> , C. 469.
<i>A' Mheirle</i> , S. 478.	<i>Coich Burn</i> , S. 23.
<i>Appnag Tulloch</i> , C. 218.	<i>Coill' Ach a' Chuil</i> , S. 176.
<i>Armadaile Burp</i> , S. 190.	<i>Croick</i> , E. Ross; personal observation.
<i>Backies</i> , S. 272.	<i>Crosskirk</i> , C. 347.
<i>Balantrath</i> , C. 213.	<i>Dail Langwell</i> , S. 49.
<i>Ballachly</i> , C. 192.	<i>Dalchork</i> , S. 394.
<i>Bell Mount</i> , C. 431.	<i>Dale</i> , C. 104.
<i>Berriedale</i> , C. 203.	<i>Doir a' Chatha</i> , S. 52.
<i>Berriedale</i> , C. 205.	<i>Duchary</i> , S. 28.
<i>Borrowston</i> , C. 510.	<i>Dun an Ruigh Ruadh</i> , W. Ross;
<i>Brabstermire</i> , C. 37.	information from Mr C. S. T. Calder.
<i>Brae</i> , S. 107.	<i>Dun Carnachaidh</i> , S. 180.
<i>Brinside Tulloch</i> , C. 434.	<i>Dun Chealamy</i> , S. 179.
	<i>Dun Creagach</i> , S. 175.

III. NORTHERN MAINLAND (*contd.*).BROCHS (*contd.*).

- Dun Dornaigil, S. 155.
 Dun Lagaidh, W. Ross; information from Mr C. S. T. Calder.
 Dun na Maigh, S. 527.
Dun Riaskidh, S. 529.
 Dun Viden, S. 181.
 Dunbeath, C. 215.
 Dunrobin Wood, S. 271.
 East Kinnauld, S. 477.
 Eldrable, S. 309.
 Elsay, C. 521.
 Everley, C. 36.
 Feranach, S. 314.
 Forsinain, S. 186.
Framside, C. 111.
 Freswick Links, C. 34.
Gansclet, C. 501.
Gills, C. 53.
 Gledfield, E. Ross; personal observation.
Golsary, C. 220.
 Green Tullochs, C. 348.
 Greysteil Castle, C. 222.
 Grum More, S. 174.
Gunn's Hillock, C. 2.
Gunn's Hillock, C. 194.
 Gylable Burn, S. 311.
Ha' of Duran, C. 436.
Hempriggs, C. 504.
 Hill of Works, C. 3.
 Hillhead, C. 520.
Hoy, C. 435.
 Inshlampie, S. 178.
 Keiss, C. 515.
Killin, S. 26.
Killouran, S. 310.
 Kilphedir, S. 307.
 Kintradwell, S. 467.
Knock Urray, C. 349.
Knockglass, C. 117.
Knockglass, C. 475.
Knockinnon, C. 216.
Kyle of Tongue, S. 530.
 Kylesku, S. 168.
 Langdale Burn, S. 177.
Latheronicheel, C. 211.
Leosag, C. 109.
 Loch Ardbhair, S. 4.
Loch Mor, S. 189.
Loch Shin, S. 391.
Lynegar, C. 471.
Mid Clyth, C. 195.
Minera, C. 197.
Murkle, C. 319.
Murza, C. 63.
Mybster, C. 96.
 Ness, C. 33.
North Calder, C. 110.
 Norwall, C. 508.
 Nybster, C. 518.
Occumster, C. 198.
 Old Stirkoke, C. 499.
 Ousedale Burn, C. 204.
 Road Broch, Keiss, C. 517.
Roster, C. 191.
Rumster, C. 219.
 Sallachadh, S. 392.
 Sandy Dun, S. 184.
Scotscaider, C. 113.
Scottag, C. 470.
Scrabster, C. 429.
 Shiness, S. 393.
Sibmister, C. 321.
Skelbo Wood, S. 106.
Skinnet, C. 116.
 Skirza Head, C. 35.
Smerral, C. 209.
Spital, C. 100.
Spital, C. 101.
Spital, C. 474.
 Suisgill, S. 308.
Tannach, C. 500.
 Thing's Va, C. 432.
 Thrumster, C. 502.
 Thrumster Little, C. 503.
Thurdistoft, C. 318.
Tiantulloch, C. 196.
Toftgun, C. 525.
Trantlemore, S. 188.
Tulach Bad a' Choilich, C. 202.
 Tulach Beag, C. 107.
 Tulach Mor, C. 108.
 Tulloch of Lybster, C. 346.
 Tulloch of Shalmstry, C. 437.
 Tulloch of Stemster, C. 344.
 Upper Borgue, C. 206.
 Upper Latheron, C. 217.

III. NORTHERN MAINLAND (*contd.*).BROCHS (*contd.*).

Upper Sour, C. 114.
Usshilly Tulloch, C. 221.
 Warehouse, C. 190.
 Watenan, C. 524.
 Watten, C. 468.
 Wester Broch, C. 513.
 Wester Watten, C. 464.
Westerdale, C. 106.
 White Gate, Keiss, C. 516.
 Yarrows, C. 509.

BROCH SITES.

Achies, C. 180.
 Auckingill, C. 52.
 Clerkhill, S. 265.
 Cnoc Chaisteal, S. 386.
 Dun Alascaig, E. Ross; *Arch. Scot.*,
 vol. v. p. 192.
 Dun Buidhe, S. 544.
 Dun Phail, S. 387.
 Ha' of Bowermadden, C. 22.
 Hoy Station, C. 179.
 Kettleburn, C. 588.
 Kilbrare, S. 24.
 Kilmster, C. 507.
 Leckmelin, W. Ross; Ordnance Survey.
 Midgarty, S. 476.
 Rattar Burn, C. 84.
 Stemster, C. 54.
 Wilkhouse, S. 476.

UNCERTAIN EXAMPLES.

Achies, C. 97.
 An Dun, Drienach; information from
 Mr C. S. T. Calder.
 Banks of Watten, C. 465.
 Bilbster, C. 514.
 Borgie Bridge, S. 185.
 Bowertower, C. 19.
 Cairn of Dunn, C. 462.
 Cairn of Humster, C. 506.

Camster, C. 18.
 Carn a' Chladda, C. 467.
 Carn Mor, Baileuachdrach, E. Ross;
 personal observation.
 Carn Mor, Birchfield, E. Ross; personal
 observation.
 Creag Leathan, C. 352.
 Dun Mor, Doune, E. Ross; personal
 observation.
 East Kinnauld, S. 479.
 Gearsay, C. 472.
 Geise, C. 430.
 Ha' of Greenland, C. 64.
 Halero, C. 1.
 Hill of Stemster, C. 505.
 Hollandmay, C. 39.
 Housel Cairn, C. 115.
 Knockglass, C. 171.
 Learable, S. 315.
 Lechanich, Upper (= Leth Choinnich),
 E. Ross; information from Professor
 Childe.
 Loch Watenan, C. 526.
 Old Hall of Dunn, C. 461.
 Old Hall of Dunn, C. 463.
 Orlig Glebe, C. 322.
 Orlig House, C. 323.
 Oust, C. 455.
 Rattar, C. 83.
 Scarfsferry, C. 62.
 Scoolary, C. 38.
 Scrabster, C. 433.
 Smerral, C. 210.
 Stemster, C. 345.
 Thuster, C. 519.
 Torrisdail, S. 528.
 Tulloch Turnal, C. 200.
 Ulbster, C. 523.

COMPARABLE STRUCTURES.

Dunan Diarmaid, W. Ross; *P.S.A.S.*,
 vol. xxix. p. 188.
 Sgarbach, C. 45.

IV. WEST COAST AND INNER ISLANDS.

Numbers refer to the Royal Commission's Inventories.

BROCHS.

- Abhuinn Bhaile Mheadhonaich, Skye, 481.
 Caisteal Grugaig, W. Ross; information from Mr G. P. H. Watson.
 Dun Ard an t-Sabhail, Skye, 478.
 Dun Arkaig, Skye, 480.
 Dun Beag, Skye, 479.
 Dun Bhoreraic, Islay; information from Professor Childe.
 Dun Boreruig, Skye, 505.
 Dun Borodale (Voradel), Raasay, 575.
 Dun Borrafiach, Skye, 510.
 Dun Colbost, Skye, 506.
 Dun Edinbain, Skye, 512.
 Dun Fhiadhairt, Skye, 508.
 Dun Flashader, Skye, 513.
 Dun Gearymore, Skye, 511.
 Dun Greanan, Skye, 539.
 Dun Hallin, Skye, 509.
 Dun nan Gall, Mull; *P.S.A.S.*, vol. lxxvii. p. 40.
 Dun Osdale, Skye, 507.
 Dun Raisaburgh, Skye, 540.
 Dun Sleedale, Skye, 477.
 Dun Suledale, Skye, 618.
 Dun Telve, Glenelg; *P.S.A.S.*, vol. i. pp. 241 ff.
 Dun Troddan, Glenelg; *P.S.A.S.*, vol. iv. pp. 83 ff.
 Glen Heyssdal, Skye, 514.
 Kingsburgh, Skye, 619.
 Sean Dun, Mull; *P.S.A.S.*, vol. lxxvii. p. 40.
 Teroy, Wigtown, 28.
 Tirefuair, Lismore; *P.S.A.S.*, vol. xxiii. pp. 375 f. and 427 f.

UNCERTAIN EXAMPLES.

- An Dun, Loch Fiart, Lismore; information from Professor Childe.
 Ardwell, Wigtown, 433.
 Dun Boraige Moire, Tiree; Beveridge, *Coll and Tiree*, pp. 78 ff.
 Dun Bornaskitaig, Skye, 564.
 Dun Borve, Skye, 515.
 Dun Borve, Skye, 620.

VOL. LXXXI.

- Dun Choinnich, Skye, 605.
 Dun Feorlig, Skye, 516.
 Dun Garsin, Skye, 482.
 Dun Heanish, Tiree; Beveridge, *op. cit.*, pp. 87 f.
 Dun Hiader, Tiree; Beveridge, *op. cit.*, pp. 80 ff.
 Dun Ibrig, Tiree; Beveridge, *op. cit.*, pp. 112 ff.
 Dun Liath, Skye, 655.
 Dun Mhadaidh, Mull; information from Professor Childe.
 Dun Mor a' Chaolais, Tiree; Beveridge, *op. cit.*, p. 75.
 Dun Mor Vaul, Tiree; Beveridge, *op. cit.*, pp. 76 ff.
 Dun Urgadel, Mull; information from Professor Childe.
 Mullach Dubh, Mid Argyll; personal observation.
 Sean Chaisteal, Mull; information from Professor Childe.
 Sean Dun, Lismore; information from Professor Childe.
 Stairhaven, Wigtown, 310.

The information at present available does not warrant the inclusion of the following sites: Barchastallain, Castle Chalamine, Castles, Duchoille, Dunan Diarmaid, Kirkmichael Glebe, Lagan-druim, and Tomaclare. (*Arch. Scot.*, vol. v. pp. 193 f.). Gordon's "Castle Chonil" (*Itin. Septent.*, p. 166) is evidently the same as Dun Grugaig, Glenelg; cf. Anderson, *Scotland in Pagan Times: The Iron Age*, p. 183.

COMPARABLE STRUCTURES.

- Ardifuair, Mid Argyll; *P.S.A.S.*, vol. xxxix. p. 260.
 Castle Haven, Kirkeudbright, 64.
 Druim an Duin, Mid Argyll; *P.S.A.S.*, vol. xxxix. p. 286.
 Dun a' Choin Dhuibh, S. Knapdale; *P.S.A.S.*, vol. lxxvii. p. 41.
 Dun Aisgain, Mull; information from Professor Childe.

IV. WEST COAST AND INNER ISLANDS (*contd.*).COMPARABLE STRUCTURES (*contd.*).

- Dun Ardtreck, Skye, 484.
 Dun Bhuirg, Mull; information from Professor Childe.
 Dun Choinichean, Mull; information from Professor Childe.
 Dun Chroisprig, Islay; *P.S.A.S.*, vol. lxxx. p. 00.
 Dun Geilbt, Skye, 602.
 Dun Grugaig, Glenelg; *P.S.A.S.*, vol. xxix. pp. 180 ff.
 Dun Grugaig, Skye, 651.
 Dun Kearstach, Skye, 649.
 Dun Liath, Skye, 541.
 Dun Mhuilig, Mid Argyll; personal observation.
 Dun na Mhuirghaidh, Mull; information from Professor Childe.
 Dun Ringill, Skye, 650.
 Dun Rudh 'an Dunain, Skye, 483.
 Dun Skudiburgh, Skye, 542.
 Dun Totaig, Skye, 518.
 Dun Traigh Mhachir, Islay; *P.S.A.S.*, vol. lxxx. p. 00.
 Dun Vallerain, Skye, 544.
 Dun Voradel, Skye, 575.
 Dunan an Aisilidh, Skye, 576.
 Dunburgidale, Bute; *P.S.A.S.*, vol. xxvii. p. 287.
 Kildonan Bay, Kintyre; *P.S.A.S.*, vol. lxxiii. pp. 185 ff.
 Luìng, S. fort, Lorne; *P.S.A.S.*, vol. xxiii. p. 406; xxv. p. 476; xxvii. p. 375.
 Peinduin, Skye, 630.

V. OUTER ISLANDS.

Numbers refer to the Royal Commission's Inventory of the Outer Hebrides, Skye, and the Small Isles.

BROCHS.

- Dun a' Chaolais, Vatersay, 442.
 Dun an Sticir, N. Uist, 171.
 Dun Borge, Lewis, 11.
 Dun Carlaway, Lewis, 68.
 Dun Cromore, Lewis, 38; *cf.* also *Arch. Scot.*, vol. v. p. 380.
 Dun Cuier, Barra, 441.
 Dun Toreuill, N. Uist, 172.
 Loch an Duna, Lewis, 10.

UNCERTAIN EXAMPLES.

- Dun Airmistean,¹ Lewis, 33; *cf.* also *Arch. Scot.*, vol. v. p. 373.
 Dun Aligaray, S. Uist, 427.
 Dun Ban, Barra, 446.
 Dun Baravat, Gt. Bernera, 71.
 Dun Borranish, Lewis, 74; *cf.* also *Arch. Scot.*, vol. v. p. 393.
 Dun Borge, Berneray; ¹ *Arch. Scot.*, vol. v. p. 399.
 Dun Borge, Harris, 125; *cf.* also *Arch. Scot.*, vol. v. p. 396.
 Dun Buidhe, S. Uist, 373.
 Dun Chlif, Barra, 448.

- Dun Loch an Duin, Barra, 445.
 Dun na Buaile Uachdraich, S. Uist, 374.
 Dun Sandray, Sandray, 444.
 Dun Sleibhe,¹ Lewis, 30; *cf.* also *Arch. Scot.*, vol. v. p. 392.
 Dun Smirvig,¹ Lewis; *Arch. Scot.*, vol. v. p. 372.
 Dun Stuigh, Gt. Bernera, 70.
 Dun Traigh na Berie, Lewis, 69.
 Dun Vulcan, S. Uist, 375.
 Dunan Ruadh, Fuday, 443.
 Dunan Ruadh, Pabbay, 447.
 Loch Baravat, Lewis, 36; *cf.* also *Arch. Scot.*, vol. v. p. 373.

COMPARABLE STRUCTURES.

- Barra Head, Berneray, 450.
 Dun Ban, Grimsay, 299; *cf.* also *Arch. Scot.*, vol. v. p. 399.
 Dun Bilaseleiter, Lewis, 34.
 Dun Loch an Duin, Lewis, 51; *cf.* also *Arch. Scot.*, vol. v. p. 378.
 Dun Scurrival, Barra, 449.
 Loch Hunder, N. Uist, 173.

¹ No structure remains; description from record only.

VI. CENTRAL AND EASTERN MAINLAND.

Numbers refer to the Royal Commission's Inventories.

BROCHS.

- Bow Castle, Midlothian, 233.
 Coldoch, Perthshire; *P.S.A.S.*, vol. ix.
 p. 38.
 Edinshall, Berwickshire, 115.
 Struy, Inverness-shire; *Arch. Scot.*, vol.
 v. p. 194, and information from Pro-
 fessor Childe.
 Tor Wood, Stirlingshire; *P.S.A.S.*, vol.
 ix. p. 29.

Torwoodlee, Selkirkshire; *P.S.A.S.*, vol.
 xxvi. pp. 71 f. and lxvi. p. 341.

UNCERTAIN EXAMPLES.

- Hurley Hawkin, Angus; *P.S.A.S.*, vol.
 vi. p. 210.
 The Laws, Angus; *P.S.A.S.*, vol. iii.
 p. 440.

VI.

NOTES ON SCOTTISH INCISED SLABS (III).

By F. A. GREENHILL, M.A.(OXON.), F.S.A.Scot.

Read January 12, 1948.

(A) ABERDALGIE, PERTSHIRE.

Sir William Olifaunt, 1330 (fig. 1).

(Slab engraved later, c. 1365.)

This wreck of a once magnificent example of Franco-Flemish craftsmanship lay originally at the north-east corner of the pre-Reformation parish church which was pulled down in 1773 when the present one was erected about 90 yards to the south-west. From 1773 to 1780 it lay in the open churchyard exposed to the weather, but in the latter year some attempt was made to protect it by putting over it another slab supported on six 12-inch pillars. This, unfortunately, proved quite inadequate, and by the end of last century most of the engraving had weathered away. Sketches of the slab were taken about 1895 by Macgibbon and Ross and by Robert Brydall, F.S.A.Scot., but, as was to be expected in the circumstances, neither of these was altogether complete. In their written descriptions both authors drew attention to the deplorable condition of the monument, and not long afterwards, in 1904, it was brought into the church and placed upon a platform under a modern sepulchral arch at the east end of the south wall. At the same time a small brass was affixed to the wall of the recess; it bears the Oliphant arms, with this inscription:

THIS MONUMENT
TO THE MEMORY OF
SIR WILLIAM OLIPHANT
OF ABERDALGIE
THE HEROIC DEFENDER OF STIRLING CASTLE
A.D. 1304
WAS REMOVED FROM THE SITE OF
THE OLD CHURCH OF ABERDALGIE
AND PLACED HERE BY
MAJOR-GENERAL LAWRENCE J. OLIPHANT, C.V.O., C.B.,
OF CONDIE
A.D. 1904.
SIR WILLIAM OLIPHANT DIED 1329.

In the following year a high tomb was erected in the churchyard by the County Council on the site of the old church. The top slab bears in the centre the Oliphant arms carved in low relief, and round the edge an incised inscription in Roman lettering:

HIC JACET DOMINUS WILLIELMUS OLIFAUNT DOMINUS | DE ABERDAGY
QUI OBIT | QUINTO DIE MENSIS FEBRUARII MILL CCC VISCESIMO (sic) NONO |
ORATE PRO ANIMA EJUS.

while on the south side is another inscription, also in Roman characters:

HERE OVER THE BURIAL VAULT OF THE LORDS OLIPHANT
LAY SINCE 1780 THE MEMORIAL ERECTED IN THE OLD CHURCH
OF ABERDALGIE TO THE MEMORY OF SIR WILLIAM OLIPHANT OF ABERDALGIE
WHOSE BRAVE DEFENCE OF STIRLING CASTLE WHEN BESIEGED
BY EDWARD I OF ENGLAND IN 1304 FORMS ONE OF THE MOST STIRRING AND
IMPORTANT EVENTS OF SCOTTISH HISTORY
RENEWED BY THE COUNTY COUNCIL OF PERTSHIRE 1905.

The slab, of bluish-grey Tournai stone, 8 feet 3 inches by 4 feet 2 inches, was originally engraved with the effigy of a man in armour under a handsome canopy with weepers in the side shafts, two shields of arms, and black-letter marginal inscription with evangelistic symbols at the corners. All that now remains is part of the figure and canopy, one shield, a few fragments of letters, and part of one evangelistic symbol (St Luke),¹ and the surface was in such a perished condition when I took this rubbing in September 1936 that extreme caution and a most delicate touch were needed to avoid injuring what is still left of the engraving.

¹ Wrongly given as St Mark by Macgibbon and Ross, *Ecclesiastical Architecture of Scotland*, vol. ii. p. 553.

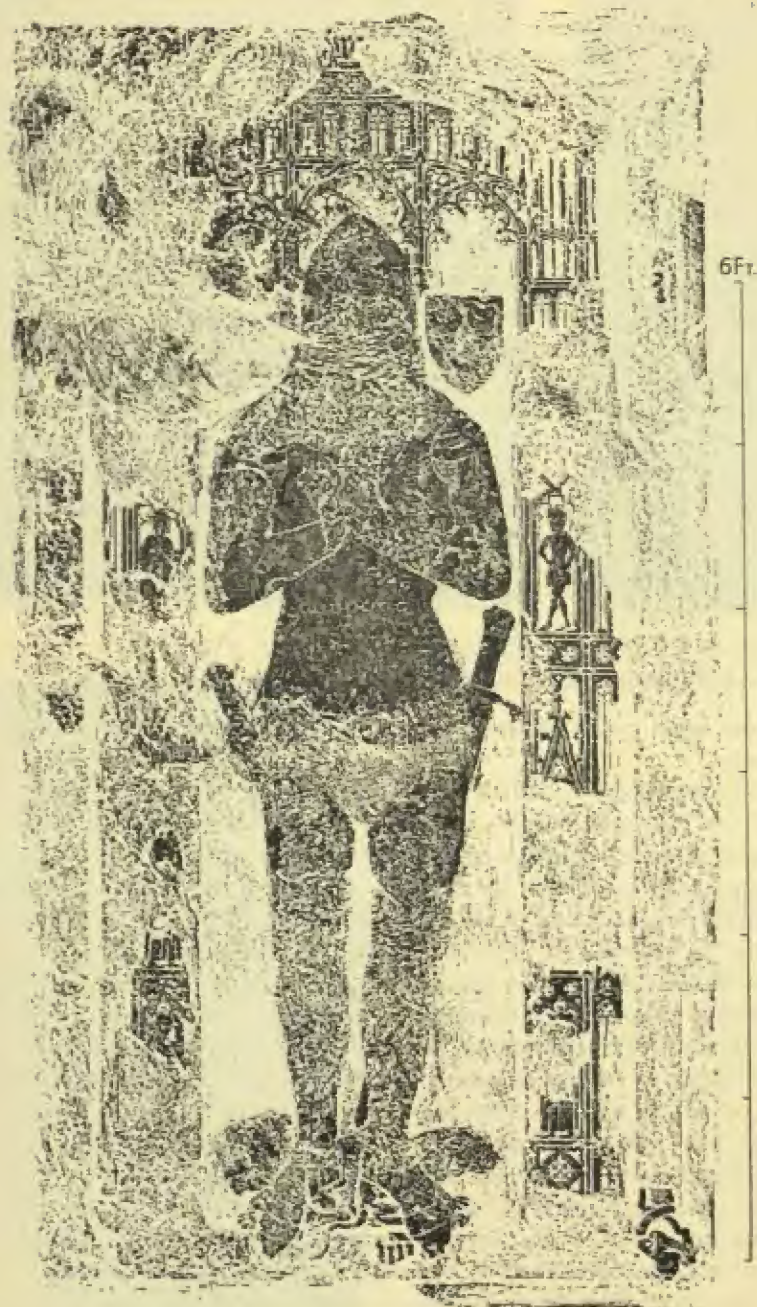


Fig. 1. Sir William Olifaunt, 1330.
(Slab engraved circa 1365.)
Aberdalgie, Perthshire.

The background has been recessed, leaving figure and accessories standing out in flat relief, giving an effect somewhat similar to that of a monumental brass, but the edges of the effigy, instead of being cut off almost at right angles as in the rest of the design, are bevelled down. The detail photographs (Pl. XIII, 1 and 2), for the use of which I am indebted to Mr Stewart H. Cruden, F.S.A.Scot., will demonstrate the successive stages by which the work was probably carried out: first, the outlines of the design would be incised on the flat slab; the background would then be hollowed out, and finally the details of the design filled in and the edges of the effigy rounded off. A similar treatment may be observed on two other foreign slabs of the fourteenth century; one, at Nossendorf (Gherard de Lynden, priest, 1364), is illustrated on page 194 of Dr Wilhelm Lübke's *Ecclesiastical Art in Germany* (Edin. 1876). The other, in the abbey of St Bavon, Ghent, bears the effigy of a civilian placed beneath a canopy; Pl. XIII, 3, which shows part of this slab, is from a photograph kindly lent by Mr James S. Richardson, LL.D., F.S.A.Scot., Inspector of Ancient Monuments.

Of the marginal inscription only a few fragments of letters (now undecipherable) survive, but most of it has fortunately been preserved in a Gask MS. of 1719:

"Dominus Willielmus Olifaunt Dominus de Aberdalgie qui obiit quinto die mensis Februarii anno Domini Mill. CCC vicesimo nono"¹

and this has been more or less reproduced in the modern inscription in the churchyard.

As in the fourteenth century the year in Britain ended on 24th March, instead of (as nowadays) the previous 31st December, the date of death falls by modern computation within the year 1330.

The knight is depicted in armour of mixed mail and plate; pointed bascinet with camail; hawberk of mail, all concealed save bottom portion and insides of sleeves on upper arms; studded jupon, rather short, its lower edge hidden under the broad hip-belt or bawdrie; and plate defences for the limbs, comprising épaulières of three overlapping plates on the shoulders, articulated coudes at the elbows, rerebraces (secured by straps) protecting outsides of upper arms, vambraces on the forearms, cuisses and jambarts covering thighs and legs, with genouillères at the knees and sollerets of five overlapping plates on the feet. The sword, with ornamented pommel, plain grip and slightly curved quillons, is suspended from the left hip, passing behind the leg; on the right side hangs the misericorde. Rowel spurs are worn. The hands are completely effaced; the feet, which impinge on the bottom margin, rest upon two dogs addorsed.

From the arming of the figure, it is evident that this slab could not have been engraved until thirty years or so after the knight's death. The

¹ Joseph Anderson, *The Oliphants in Scotland* (Edin. 1879), Introduction, p. xxi, note.



1.



2.



3.

Detail Photographs.

- 1 and 2. Aberdalgie, Perthshire,
(By courtesy of Stewart Cruden, F.S.A.Scot.)
3. Abbey of St Bavon, Ghent,
*(By courtesy of James S. Richardson,
LL.D., F.S.A.Scot.)*

armour he must have worn throughout his lifetime, apart from the large pot helm comparatively seldom shown on monuments, was mail, either complete or with one or two minor reinforcements of leather or plate, and the long linen surcoat, as portrayed on the sculptured effigies of "the Good" Sir James Douglas (1330) in St Bride's Kirk, Douglas, Lanarkshire, and a knight of the Menteith family, of about the same date, at Inchmahome Priory, Perthshire. The harness depicted on the slab only came into use shortly before 1360. I have not seen an example of the studded jupon later than c. 1370, and the figure bears a decided resemblance to that of Sir Miles Stapleton (1364) on his brass (now lost) at Ingham, Norfolk.¹ As the arches of the canopy also bear a distinct likeness to those on another brass of the year 1364 (Robert Braunce, at St Margaret's, King's Lynn, Norfolk), this slab can confidently be dated c. 1365. It was probably ordered by Sir William's son, Sir Walter Olifaunt, who last appears in 1378.

The canopy is of three arches, cusped and crocketed, with a panelled arcade above. Each of the side shafts contains three canopied niches in which are placed small figures known as "weepers"; one of these is missing, while of the remainder one only is entire, the other four surviving in a somewhat fragmentary condition: all are in civilian dress:

- (1) UPPER DEXTER.—Man in curious cap, wearing cloak fastened from neck to middle of breast, beneath which it is open, revealing what seems to be a tunic; lower part effaced.
- (2) MIDDLE DEXTER.—Man, apparently wearing some form of cap, ankle-length tunic and long pointed shoes.
- (3) LOWER DEXTER.—Man, all lost but head, on which is a close-fitting cap or coif.
- (4) UPPER SINISTER.—Man, arms akimbo, attired in short close-fitting tunic belted round the loins, long hose and pointed shoes; on his head a queer cap with small button-like ornament on top.
- (5) MIDDLE SINISTER.—Figure now lost, but Brydall's sketch,² taken c. 1895, shows the lower part of what was apparently a civilian in long tunic.
- (6) LOWER SINISTER.—Man, lower part only now left, in long tunic and long pointed shoes.

To sinister of the head is a shield bearing Oliphant (*Gu*) 3 *crescents* (*arg.*); the dexter one has now disappeared, though part of the outline is given in Macgibbon and Ross's drawing.³

¹ Ill. Cotman, *Sepulchral Brasses in Norfolk* (London, 1838), pl. iv., and Stothard, *Monumental Effigies of Great Britain* (London, 1876), pl. lxviii.

² Ill. *Proc. Soc. Ant. Scot.*, vol. xxix. p. 302.

³ *Ecclesiastical Architecture of Scotland*, vol. ii. p. 552.

The slab is foreign work, and there is no doubt that members of the wealthier classes in mediæval Scotland were in the habit of ordering their monuments from abroad: all the slabs I have seen in this country bearing indents of brasses are of Tournai stone, while incised slabs of foreign make still survive at Rossie, Perthshire, St Andrews Cathedral, Fife, and Kelso Abbey, Roxburghshire,¹ and we know from the Halyburton Ledger that Archbishop Schevez of St Andrews, who died in 1497, had his monument prepared at Bruges, in which city the "throwet" of his successor in the primacy, James Stewart, Duke of Ross, was also made.²

It will be noted that the modern inscriptions in the church and churchyard identify the Sir William of the monument, who died in 1330, with the famous defender of Stirling Castle in the great siege of 1304. There was, however, another Sir William—Sir William Olifaunt of Dupplin, probably a cousin of the Constable of Stirling³ and contemporary with him; he acted as second-in-command of Stirling Castle during the siege, and up to that time was closely associated with his more renowned kinsman. Thereafter there is record of both till 1313, after which only one can be traced, and it is impossible to be certain whether this was the Constable or the knight of Dupplin.

They first appear together in 1296, when one was already a knight, the other an esquire. The former was evidently by then a man of some standing, for a document executed in 1294 by Robert Wishart, Bishop of Glasgow, forbidding the principal men of the Lennox to hold intercourse with certain excommunicated persons, expressly mentions Sir William Olifard,⁴ knight (presumably the same person), as one of those to whom the inhibition is addressed,⁵ and about the same time he witnessed charters by the Earls of Atholl⁶ and Lennox.⁷

In the disastrous action at Dunbar (27th April 1296) both were captured and sent prisoner to English castles, the knight to Devizes,⁸ the squire to Rochester,⁹ where they remained till the following year, when they were liberated, the squire on 18th August, the knight on 8th September,¹⁰ on condition of serving in the English expedition then preparing against France. In fulfilment of this engagement they passed overseas, embarking at Sandwich, but nothing seems to be known of their doings in Flanders,

¹ Of the Kelso slab only a fragment now remains.

² *Ledger*, pp. 7 and 215.

³ In the official record of the surrender of Stirling Castle (see Rymer, *Fœdera* (1727), vol. ii. p. 951) Sir William Olifaunt of Dupplin is described as "consanguineus" of the Constable.

⁴ As the name was written prior to about 1310.

⁵ *Reg. de Passelet*, p. 203.*

⁶ *Hist. MSS. Commission Report*, vol. vi. p. 690 (as Sir William Olifard, knight).

⁷ *Cartularium Comitatus de Lennox*, pp. 41, 46 and 81 (as William Olifard, knight), and p. 87 (as William Olifard).

⁸ *Calendar of Documents Relating to Scotland*, vol. ii. p. 170.

⁹ *Ibid.*, pp. 177-8.

¹⁰ *Documents Illustrative of the History of Scotland, 1286-1306* (1870), vol. ii. pp. 257 and 259.

though they were doubtless among the Scots who, with Atholl and Comyn, escaped to the French at the time of Edward's hurried return to England early in 1298, for when towards the end of 1299 the small English force in Stirling Castle was starved out and surrendered to Sir John de Soulis, one of the regents, the fortress was committed to the keeping of Sir William Olifaunt.

Edward's invasions of 1300 and 1301 did not penetrate to central Scotland, but in 1303 he overran the country as far as the Moray Firth, leaving Stirling to be dealt with at leisure, and early in 1304, after dispersing the last remnants of the Scottish field forces under Comyn near Stirling Bridge, prepared to besiege the one stronghold that still defied his authority. Olifaunt, realising the hopelessness of resistance, felt bound nevertheless by his oath to the regent (then in France) not to surrender without the latter's consent. He therefore asked for time to refer to France for instructions, undertaking to deliver up the castle immediately on receipt of the necessary orders from de Soulis. Edward promptly rejected the proposal. "If he will not surrender the castle," he cried, "let him keep it against us at his peril."

The defence of Stirling Castle from 22nd April to 13th July 1304 with only 140 men against an army directed by Edward in person stands out as the most heroic episode of the Wars of Independence, and established the Constable's fame as one of the leading soldiers of his time. Seldom have enemies paid more glowing tribute. "A knight right vigorous and prudent,"¹ exclaims Trivet; while Matthew of Westminster calls him "a doughty knight, a chosen man among thousands."² Edward himself, who on at least two occasions during the siege narrowly escaped with his life, said that Olifaunt and his men fought "like mad dogs."

His little band reduced by famine, the walls battered to pieces by Edward's siege engines, Olifaunt was at last compelled to surrender unconditionally. His life and those of his followers were spared, but the officers were all removed to English prisons. Sir William was lodged in the Tower, where Wallace was soon to be his fellow-captive. His second-in-command, Sir William Olifaunt of Dupplin—evidently the squire of 1296 who had received knighthood during the interval—was consigned to Wallingford Castle.

The Constable of Stirling remained in the Tower for nearly four years, but on 24th May 1308 he was released on surety³ and went to Scotland in the English interest. In November 1309 he was once more at Stirling, and towards the end of 1311 succeeded the Englishman Sir John Fitz-Marmaduke as Warden of Perth.

¹ "Militem admodum strenuum et cordatum."

² "Animoso milite, electo de millibus."

³ Rymer, *Fœdera* (1818 edn.), vol. ii. p. 45.

It is disappointing to find so sturdy a patriot entering the service of England, even though there were very few among the prominent Scottish leaders who did not change sides at any rate once during the long struggle. But powerful reasons were not lacking. The judicial murder of Wallace, perpetrated while Olifaunt lay in the Tower, may have convinced him, however sorely against his will, that the cause of independence was finally lost. For Bruce, who had furnished siege engines to Edward to help batter down the walls of Stirling Castle while he and his brave handful were starving within, he can hardly have felt anything but hatred and contempt. Prior to the murder of Comyn, he probably detested him as a "collaborator," and that ill-starred act may well have served to inflame his animosity, for the murdered man had been the last to try and make headway against Edward in the field and had fought on while a spark of hope remained, while Bruce's conduct up to that time had been, at best, equivocal. When after the murder Bruce rose in revolt and had himself crowned, Olifaunt, like many others, probably saw in it only the mad gamble of an adventurer, for few could then have foreseen the amazing development that in a few brief years was to transform a selfish time-server into a national hero.¹ And so when in November 1312 Bruce (according to the usually received account) sat down with his army before Perth, he encountered such a stubborn defence by Olifaunt and his mixed garrison of English and Scots that after six weeks he found it expedient to draw off and resort to stratagem. Having concealed his force at a distance until Olifaunt, finding no trace of the enemy, began to relax his vigilance, he returned secretly after an absence of eight days, and in a brilliant night attack on 8th January 1313 took the defenders by surprise and carried the town. All the Scots leaders in the garrison were put to death save Olifaunt, who, according to the *Lanercost Chronicle*, was "bound and sent far away to the Isles."²

It is at this point that all certainty regarding Sir William Olifaunt, Constable of Stirling Castle and later English Warden of Perth, comes to an end.

There was undoubtedly a Sir William Olifaunt in England on 10th March 1313,³ within a few weeks of the capture of Perth, and on the strength of this Joseph Bain, in the Introduction to Volume III, *Calendar of Documents Relating to Scotland* (pp. xvii and xviii), and Mrs Maxtone Graham, in her book on the Oliphants of Gask (p. 30), throw doubt on the Lanercost story. But while a bad conscience may have prompted Bruce to spare the hero of Stirling, it is inconceivable that he should permit so dangerous an adversary to depart out of his power, and it seems that the Sir William

¹ It is perhaps significant that several of his former officers in the Stirling garrison (though not the knight of Dupplin) returned with Olifaunt to Scotland in the English service.

² *The Chronicle of Lanercost* (trans. Sir Herbert Maxwell) (Glasgow, 1913), p. 202.

³ *Exchequer D.R. Miscellanea*, fo. 28.

who was in England at that time could only have been the knight of Dupplin. We know that he was in prison at Wallingford till February 1307 at least, and it looks as though he had so far remained in England. He was presumably the "William Olyfaunt, knight," who on 5th June 1309 granted a bond to Sir Hugh le Despenser, *père*, for 100 shillings, to be paid at the latter's hostel in London "at the quinzaine of St John next."¹ On 21st October 1313 he received a safe-conduct to go to Scotland and return again.² Whether he fulfilled its terms or broke them by staying in his own country we have no means of knowing. All that is certain thereafter is that a Sir William Olifaunt—either the Constable or the knight of Dupplin—appears in record from 1315 onwards as one of the Bruce's main supporters. In February of that year he witnessed a charter of King Robert to Sir Andrew Gray. Five years later, as one of the greater barons, he was present at the Parliament of Arbroath, and his seal, containing the first known portrayal of the family arms, is among those affixed to the celebrated Letter to the Pope of 6th April 1320. On 8th March 1327 he attended the Parliament held at Holyrood, and on 16th January 1330, at Newbattle, rendered an account of his receipts as King's Escheator for Perthshire.³ On the following 5th February he died, outliving King Robert by exactly eight months. He received from the Crown at various times grants of lands in Angus, Ayrshire and Perthshire, and his son Walter wedded the King's daughter, Elizabeth Bruce. This is the Sir William of the monument.

To the question "Which of the two was he?" there appears to be no final answer. Joseph Anderson⁴ assumes that he was the Constable, though without stating his grounds for so doing. Mrs Maxtone Graham⁵ likewise identifies him with the Constable, perhaps through mixing up the latter with the other Sir William who was in England in March 1313. Their attribution was evidently accepted by those responsible for the modern inscriptions set up in the church and churchyard. Dr Maitland Thomson, however, while admitting that the matter is not entirely free from doubt, adopts the opposite view. Speaking of the Constable's banishment to the Isles, he says: "Probably he died there in captivity; at all events he appears no more in record."⁶ He also points out that the appearance of the Constable among the chief men of the Lennox in 1294 would seem to indicate his early marriage with a lady of that region, while Aberdalgie came to the Olifaunts through matrimony with a Wishart.

¹ *Catalogue of Ancient Deeds in the Public Record Office*, vol. iv., A6310.

² *Calendar of Documents Relating to Scotland*, vol. liii., No. 339.

³ *Exchequer Rolls of Scotland*, vol. i. p. 247.

⁴ *The Oliphants in Scotland*, Introduction, pp. xvii. and xviii.

⁵ *The Oliphants of Gask*, pp. 30-31. She does, however, in a footnote to p. 30, refer to Dr Maitland Thomson's contrary view.

⁶ *The Scots Peerage*, vol. vi. p. 532.

On these grounds, apparently, he identifies the Sir William of the monument with the knight of Dupplin.

As to the points made by Dr Thomson:

(1) It is true that we have no certain record of the Constable's career after his banishment to the Isles, but we are left equally uncertain as to what became of the knight of Dupplin after he got his safe-conduct in October 1313. There is, of course, nothing improbable in Dr Thomson's assumption that the latter violated its terms and remained in Scotland. But is there any greater improbability in assuming that the Constable would be likely to make an early return to the national party? Bruce had surely every incentive to win over so potentially valuable a supporter, while the Constable had everything to lose by longer adherence to the English side, and could now without loss of honour seek a reconciliation with his old enemy.

(2) The Constable's presumed marriage with a lady of the Lennox prior to 1294 would not appear to negative the possibility that at a later period he became laird of Aberdalgie. According to the *Scalacronica*,¹ he was still, in 1304, "un iouen bacheler Descoco" (a *young*² Scottish knight), and if the Lennox lady predeceased him, he would in the normal course be likely to marry again. According to the Midlothian escheats of 1337,³ Walter Olifaunt was then still a minor, which goes to suggest that whichever of the two Sir Williams it was who married the Wishart heiress wedded her fairly late in life. The lands of Aberdalgie were certainly held about 1300 by one William Wycharde,⁴ and in 1330 by the Olifaunts, but I can find no record of the date at which the latter acquired them, though it seems unlikely that this would be earlier than about 1315.

It is worth noting that the inscription formerly on the slab described its subject simply as laird of Aberdalgie. Now if, as Dr Thomson infers, the original seat of the Olifaunts in Perthshire was Dupplin, where they had been settled since about 1200, one would expect that if the monument related to the knight of Dupplin, he would have been described as of that place. If it had been he who married the Wishart heiress, he might have been designated as of Dupplin and Aberdalgie, or of Aberdalgie and Dupplin, but hardly, one would suppose, as of Aberdalgie alone.

In February 1365, *i.e.* at about the same time as this slab was ordered, Walter Olifaunt and Elizabeth his wife, the King's sister, received from David II new charters of all their lands in return for their surrender under the old infefments, and one of these charters was granted in respect of the lands of

¹ *Scalacronica* (Maitland Club, 1836), p. 127.

² Italics mine.

³ *Calendar of Documents Relating to Scotland*, vol. iii. p. 379. "Concerning a certain piece of land called Nakederse which belonged to William Olifant who held in chief from the king, now remaining in the king's hand as guardian and which extends to the value of 60 shillings and 8 pence, it will be liable for 16 shillings and 8 pence." (The translation is mine.)

⁴ *Calendar of Documents Relating to Scotland*, vol. ii., No. 1070.

Aberdalgie and Dupplin.¹ This, and the mention of Aberdalgie *only* in the inscription, may possibly imply that the lands of Dupplin were never held by the Sir William, laird of Aberdalgie, who died in 1330, but came to Walter at some time subsequent to his death, *i.e.* that this Sir William was the Constable of Stirling and not the knight of Dupplin. Walter, however, on 1st March 1363 witnessed a charter² as "dominus de Abyrdalgy," so that unless the lands of Dupplin came to him between that date and February 1365, they had presumably been merged with those of Aberdalgie prior to 1363, in which case the monument might be that of either.

Incidentally, the traditional genealogy, compiled in 1580, states that Walter Olifaunt *was* the son of the Constable, but while it may well be correct as to this, it contains several errors on other points, so that its testimony cannot safely be relied on.

On the meagre evidence thus far available there seems no way of determining which Sir William the slab commemorates, and the attribution of the modern inscriptions set up in the church and churchyard must remain in doubt.

And here it is necessary to draw attention to an error in Sir Herbert Maxwell's translation of the latter part of the *Scalacronica*.³ At page 52 (dealing with the events leading up to Bannockburn) the following passage occurs:—

" . . . the chronicles explain that after the Earl of Atholl had captured the town of St John for the use of Robert de Brus from William Oliphant, captain [thereof] for the King of England, being at that time an adherent of his [Edward's], although shortly after he deserted him, the said Robert marched in force before the castle of Stirling . . ."

This, had the translation been correct, would have provided the valuable information that the Constable *did* return to the national side soon after the capture of Perth, which in turn would have established a strong probability that the monument was his. Unfortunately, the passage hardly admits of such a construction. It reads:

" . . . lez croniclis devisent qe apres ceo qe le count de Athelis avoit emble la vile de saint Johan sure William Olifart, capitayn depar le roy Dengleterre, al use Robert de Bruys, com cely qenherdaunt estoit a ly al hour mais tost ly guerpy, qi Robert se trey en ost devaunt le chastel de Strivelyn . . ."⁴

On referring to this, it seemed to me that "cely" must almost certainly refer, not to Olifaunt, but to Atholl, and I therefore submitted the passage to Professor John Orr, M.A., B.Litt., L. ès L., of Edinburgh University (to

¹ *The Scots Peerage*, vol. vi. p. 536, note.

² Charter of the lands of the barony of Melkeour by Maurice Drummond to John Mercer, Burgess of Perth, printed in Cowan, *The Ancient Capital of Scotland* (London, 1904), vol. i. pp. 266-268.

³ Glasgow (1907).

⁴ *Scalacronica* (Maitland Club, 1836), p. 140.

whom I would express my thanks for his ready help), whose expert judgment confirmed my view. The correct rendering is therefore:

" . . . the chronicles explain that after the Earl of Atholl had taken the town of St John against the opposition of William Olifaunt, captain [thereof] for the King of England, on behalf of Robert de Brus, whose adherent he [Atholl] was at the time, though he soon deserted him, the said Robert, etc. . . ."

This accords exactly with what is known of Atholl's conduct at this period. In February 1312 he is Edward II's "well-beloved and faithful David, Earl of Atholl," and has a grant of two of the Templars' manors in Yorkshire, to be held by him during the King's pleasure.¹ In May 1313 the grant is revoked, because David, Earl of Atholl, "now adheres to Robert de Brus, our enemy and rebel, as we have heard."² But by the end of 1316 he is once more in high favour at the English court, and receives permission to keep any movable goods of the Scots, "our enemies and rebels," that he can seize, and also the ransoms of any of the said enemies he is able to capture, the King binding himself, should he desire to have any of the Earl's prisoners handed over to him, to pay the Earl 100 marks for each such person.³

I would express my grateful acknowledgments to the Rev. R. S. V. Logie, parish minister of Aberdalgie, and Miss Mary Smith, interim County Librarian, Montrose; also to the late Mr Thomas McLaren, F.S.A.Scot., and the late Mr J. Ross Smyth, of the Sandeman Public Library, Perth, for much kind help.

(B) STOBO, PEEBLESSHIRE.

There are three slabs here, all in the north chapel; all are of brownish-grey sandstone. No. 2 stands against the east wall, the other two are built into the north wall. I took these rubbings in April 1945.

(1) *A Man in Armour* (? early Sixteenth Century).

I think the title of this paper should perhaps have been "Dignity and Impudence," for after the magnificent slab with which I have just dealt, it almost savours of an obscene jest to introduce this (fig. 2).

The slab was discovered in May 1928. The effigy, without exception the crudest I have seen on any Christian monument, and obviously not the work of an ordinary engraver, but of some very raw local hand, is more suggestive of a South Sea idol than a human form, and the only excuse for putting it on record is the somewhat unusual costume its begetter

¹ Rymer, *Fœdera* (1727), vol. iii. p. 303.

² *Ibid.*, vol. iii. p. 404.

³ *Ibid.*, vol. iii. p. 587.

has attempted to portray. On the body is a garment presumably intended for a jack—a form of "poor man's armour"—in this case probably of quilted linen, over which is worn a narrow hip-belt. The limbs are apparently in plate armour, for it seems that coudes are intended at the elbows and genouillères at the knees, and the feet are encased in pointed sollerets, with rowel spurs. Whether the lines which fringe the upper part of the face are meant to represent hair or a small close-fitting helmet it is impossible to say, but the slight peak at the top, together with the absence of ears, may perhaps suggest the latter. The hands are evidently supposed to be placed one behind the other in an attitude of prayer. On sinister side, partly covered by the left shoulder and arm, is a large two-handed sword with pear-shaped pommel, bound grip, and straight quillons.

At top, to sinister of the head, are two curious objects more lightly engraved than the figure and sword, which are deeply cut: what these are intended to be I cannot make out, as they do not seem to be identifiable as initials; they may be the idle work of some tomb-defacer of later days.

The extreme crudeness of the engraving renders the fixing of an approximate date in this case somewhat difficult, but pointed sollerets went out of fashion in England about 1485, and allowing for some time-lag in Scotland, the slab should probably be assigned to the first half of the sixteenth century. It is, so far as my experience extends, unique in its representation of the jack.

The dimensions are 5' 6½" long by 1' 8" at top and 1' 6" at bottom.

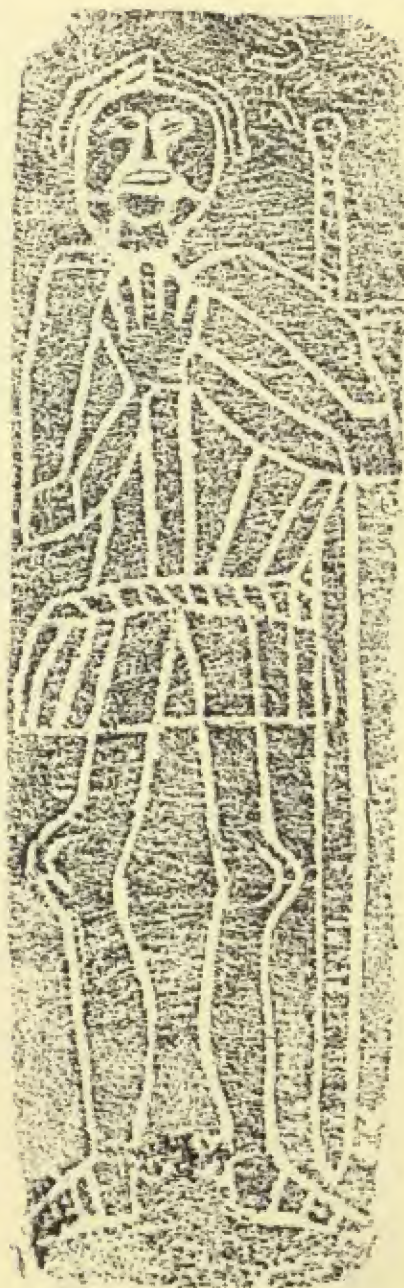


Fig. 2. A man in armour (? early 16th century).

Stobo, Peeblesshire.



Fig. 3. A mill-rind (? late 13th or 14th century).
Stobo, Peeblesshire.
(same scale as fig. 4)

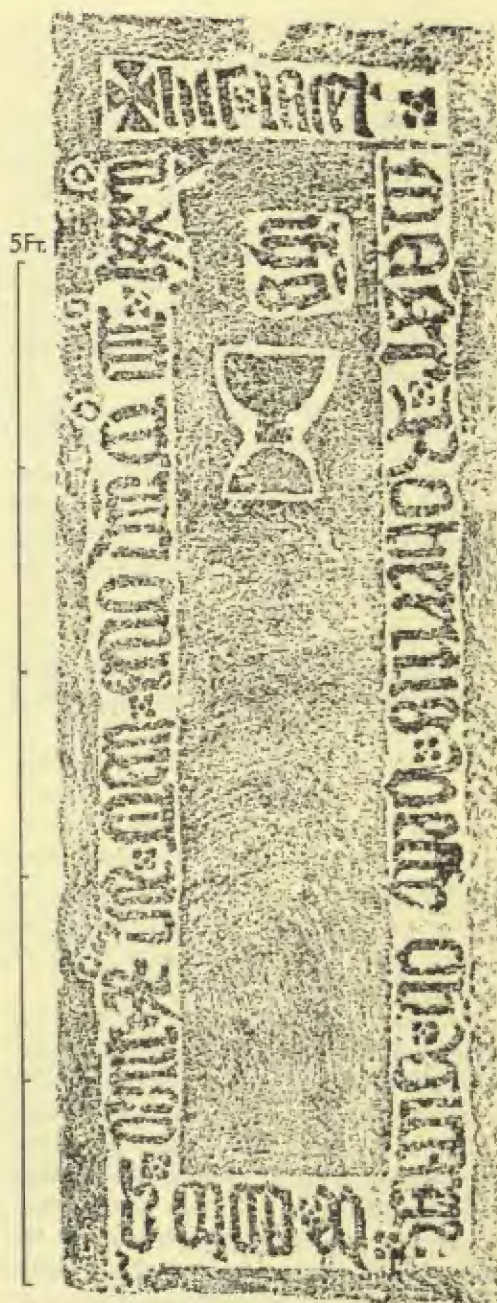


Fig. 4. Robert Vessy, Vicar of Stobo (1473).
Stobo, Peeblesshire.
(extra margin on sinister side not shown)

(2) *A Mill-rind (? late Thirteenth or Fourteenth Century).*

This slab (fig. 3) is $5\frac{1}{2}$ inches thick and measures $5\frac{1}{2}$ feet in length. It tapers slightly, being 1 foot $9\frac{1}{2}$ inches wide at top and 1 foot 7 inches at base. In top dexter corner is a mill-rind; the only other engraving consists of two lines marking off an oblong section along the upper sinister edge, whose significance I am unable to determine (? possibly some part of the furnishings of a mill). The slab is extremely difficult to date, but may perhaps be as early as the late thirteenth century, and presumably covered the grave of a miller.¹

Mr Wilson, the schoolmaster, informs me that a few years ago this slab, which lay previously in the churchyard, was removed and placed in its present position at the charge of a casual visitor.

(3) *Robert Vessy, Vicar of Stobo (1473).*

The slab (fig. 4) is 6 feet $3\frac{1}{2}$ inches long and apparently about 3 feet 1 inch wide, and partly concealed on sinister side by the roof vaulting. It bears a chalice with sacred monogram above. The black-letter inscription runs close to the top, dexter and bottom margins, but the sinister line is some distance in from the edge of the stone, a most unusual arrangement (not shown in illustration). Beginning at top and running to sinister, it reads:

"Hic iacet | Mag(iste)r Robertus Vessy oli(m) vicari(us) | de stobo q(u)i | obiit x^o die Maii an(n)o d(omi)ni M^oCCCC^oLXXIII."²

The letters in brackets are represented by contraction marks. At the commencement is a cross patée, and quatrefoils are interposed between most of the words.

¹ For other illustrations of mill-rinds on tombstones, see *Proc.* xl. 235, 236.

² This differs from the reading given in *Scot. Eccles. Soc. Trans.*, vol. ix. p. 76, but after careful study on the spot I believe it to be correct.

VII.

FURTHER NOTE ON THE BIRTHBRIEF OF WALTER INNES.
 BY SIR THOMAS INNES OF LEARNEY AND KINNAIRDY,
 K.C.V.O., F.S.A. SCOT., LYON KING OF ARMS.

Read January 13, 1947.

An illustration is now forthcoming of the birthbrief from the city of Aberdeen, 9th July 1669, in favour of Walter Innes, in the service of the Queen Dowager, Henrietta Maria, of which a translation was printed in the *Proceedings* for 1920-21, vol. lv. p. 105, by the Very Rev. J. Stirton, into whose possession the original document had come.¹ Whilst he gave a general description thereof, the present notice deals with the technical aspect of the document from several important antiquarian angles. As will be seen from the illustration (Pl. XIV), it is an attractive illuminated parchment bearing the Royal Arms at the top, and on either side the coats-of-arms representing the eight branches of the petitioner's ancestry—namely, on the right, Innes of Drainie, Rose of Kilravock, Gordon of Cairnborro, and Falconer of Halkerton, being the paternal branches, and on the left the maternal branches, Young of Kinminitie, Gordon of Daach, Duff of Terrisoull, and Pittendreich of that Ilk.

The petitioner Walter Innes, who had gone abroad, apparently in the Queen's service, about 1642, was the son of Alexander Innes of Kinminity, a second son of Innes of Drainie in Moray. The house of Innes of Drainie was an important cadet of the family of Innes of that Ilk, and noticeable for its High Church and to a considerable extent Catholic persuasions, and the Lairds of Drainie had held office as bailie of the episcopal regality of Spynie, and as bailie of the Bishopric of Moray, an office equivalent to that known as *Vidame* in the bishoprics of France. The first of the family, Robert Innes, whose line before acquiring a feudal title had been tenants of the episcopal territory of Drainie, was the third son of Sir Robert Innes of that Ilk, known as "Ill Sir Robert," whose eldest son, Sir James Innes of

¹ The birthbrief was among the muniments of the family of Innes of Balnacraig, of which an account appears in the *Deeside Field*, vol. v. p. 76, and was among the possessions of that family which were scattered as promiscuous gifts by Mrs Chisholm of Glassburn (see J. Stirton, *A Day that is Dead*), the actual representatives of the Balnacraig family being the Inneses of Arsallery in Glenesk, descending from Innes of Drainie through Sir John Innes of Braco, Kt., and the Inneses of Blackhills-in-Dallas (*Lyon Reg.*, vol. xxxvi. p. 57). More fortunate than some of the Jacobite relics of the family which have vanished, the birthbrief came into the hands of Dr Stirton, who brought it under historical notice.



Birthbrief of Walter Innes, 1669.

that Ilk, Squire of the Body to James III, became ancestor of the Inneses of that Ilk, and Dukes of Roxburgh.

Precisely why Walter's birthbrief was obtained from the city of Aberdeen instead of from the Lord Lyon, and therefore recorded in the Public Register of All Genealogies and Birthbriefs in Scotland—which would have seemed more becoming in the circumstances, particularly for a member of the household of the Queen Mother—is not, of course, disclosed to us. Then certain discrepancies in the textual pedigree would not have occurred, nor certain slips in the heraldry. It may be assumed that he made application to James Skene, burgess of Aberdeen, or that on writing to his cousin, the Laird of Drumgask, the latter was assured by James Skene that this would be a cheaper and easier way of obtaining the document than by applying to Edinburgh. In the result, however, we find by comparison with the texts of Lyon Court Birthbriefs, interesting evidence of the technical distinctions between two forms of genealogical proof. It may, however, first be observed that since Queen Henrietta Maria died in 1669, the birthbrief was presumably applied for on that account, and with the purpose of securing a testimonial to obtain some other employment. Attractive though the document is, one is obliged to point out that, since it had no Royal or governmental authority, the arms at the top should have been those of the city of Aberdeen and not the Royal arms, which are appropriate only on a birthbrief from the Lord Lyon. Again, the unfortunate consequences for a person in this station not obtaining his birthbrief from the appropriate source emerged even in the paternal arms of the petitioner himself, for the shield of Innes of Drainie is painted with the armorial tinctures arranged inverted, viz. azure, a crescent between three mullets argent, instead of argent, a crescent between three mullets azure.

It is nevertheless a document worthy of note, as showing the interest taken in kinship in the greater Scottish burghs, where a Municipal Propinquity Book was kept. Their Councils sat in judgment upon genealogical claims, principally in relation to burgher families, and to what upon the Continent are known as the lesser ranks of *burger-adel* and the municipal *patriarchaacht* of mercantile cities, a lesser form of nobility than the feudal baronage or gentry.

A birthbrief from the Lord Lyon commences: "To All and Sundry whom these Presents do or may concern, and especially unto those of noble race competent by whatsoever means of authority or position to take cognisance of titles, We, Sir X of Y, Lord Lyon King of Arms, Send Greeting in God Everlasting"; the municipal birthbrief, although duly specifying "High and Mighty Kings" and others as amongst its prospective recipients, comes down to those to whom such a document was more likely in ordinary practice to be presented—"Provosts, Magistrates and Councils of Towns, Cities and Maritime Ports." In the Lord Lyon's birthbrief there follows a grand

preamble stating the reason why it has been the especial care of the State to maintain genealogies and arms in a state of purity and correctness, and as an example and inspiration to those descended of these illustrious and unspotted houses included in the Public Register of All Genealogies and Birthbriefs. In the municipal version this does not occur. The Provost and Magistrates, however, carefully intimate that the petitioner's agent appeared in presence of "us sitting in judgement," and then, in case of misapprehension, after adding, "the petition being so just we could not reasonably decline it," naively explain that they had taken some evidence of witnesses, "that it may be found that we did not grant these presents rashly or by mere assent." The Lord Lyon's variety is much more grandiose, in the form of a patent or certificate, narrating antecedent procedure by proof and judgment, after which follows the most grandiose description of all sorts of nobility, chiefship, details of fiefs and estates, and in short all the other requisites which will render the holder of the document an attractive subject for matrimony or the rank of field-marshal.

The municipal birthbrief, on the other hand, proceeds more modestly with the genealogy, and unfortunately gets the names of the successive Lairds of Drainie inverted, much as it does the colours in their coats-of-arms, though otherwise the pedigree set forth is accurate.

The Magistrates then proceed to "earnestly request all and sundry among whom the said Walter may tarry" that they recognise the applicant in terms of the certificate. The Lord Lyon does nothing of the kind; he assumes that his "conclusive testimony" will be received with the respect it deserves amongst all the high and mighty to whom it has been addressed, and whilst expatiating on the grandeur of his subject, does not, like the Provost and Magistrates of Aberdeen, commit himself about the character and moral probity of the illustrious person, either because such an averment would have been superfluous, or some might say risky. But perhaps the climax comes towards the conclusion, where the municipal birthbrief enjoins the presumably municipal recipients, and perhaps the high and mighty kings, princes, etc., "that if they do this which we hope that they will do, we freely promise to render them, when the occasion arises, equal if not greater service." This specimen of the genealogical *quid pro quo* has naturally no place in the Lord Lyon's *diploma stematis*. This concludes by a further pronouncement that the King of Arms does "Will and Declare that the proper blason and tokens of nobility of the subject as recorded in his archives are of such and such a blason"; and finally, in order that the qualities of nobility in relation to the foreign country specified may be the more certain and avouched by extracts, he ordains the birthbrief to be recorded in the Public Register of Genealogies, and causes his official seal to be appended thereto at Edinburgh. While the corresponding authorities in Spain described their capital as "the Most Noble, Most Loyal and Imperial, Most Heroic and Kingly Town and Court

of Madrid," neither the Lord Lyon nor the Magistrates seem to have thought of a suitable string of adjectives for prefixing to the cities of Edinburgh and Aberdeen.

The normal purpose of municipal birthbrieves, such as this obtained for Walter Innes, was of course to avouch the integrity and status of the member of one great burgh family to the trading community of similar mercantile cities on the Continent, whilst those of the Lord Lyon were directed rather to establishing, whether at home or abroad, the nobiliary status, qualifications for office, dignities or titles, or what on the Continent is termed *ebenbürtlichkeit* in relation to matrimony, and establishing to the satisfaction of those concerned his position in the family as cadet or head. In short, the two varieties of document were intended for a different purpose and a different class of recipient, and no doubt the municipal birthbrief was a much cheaper variety of document in the seventeenth century. At any rate, as we see, it was, though less heraldically accurate than those from the Lord Lyon, an attractive-looking document, and of course a valuable family muniment.

The armorial decoration is interesting and effective, though, as might be expected in a document from a municipal source, it is by no means accurate. In the top centre appear the Royal arms for Scotland, presumably to give the document a flavour of regal authority which it did not possess, and the Ensigns Armorial of the city of Aberdeen which issued it are, strange to say, absent. One might have expected the two coats of the burgh of Aberdeen, the towers and St Nicholas, to have appeared at least on either side of the Royal arms.

Down each side in the approved lay-out of the period appear the arms attributed to the eight branches of the recipient, and since most of these are contemporary drawings of arms which had not yet been matriculated in the Public Register of All Arms and Bearings in Scotland, it is useful to itemise the blasons:—

1. *Innes of Drayne*. Azure, a crescent between three mullets Argent. (This is wrong in any event, as the tinctures have been counter-changed.) Crest, a dexter hand a forearm issuant from a cloud and holding a chaplet all proper. (It is difficult to say of what the chaplet consists; it may have been intended for laurel, and hardly looks prickly enough for holly.)

2. *Rosse of Kilraock*. Azure, three water bougets Argent, two and one, a boar's head coupé in chief. (Here both the emblazonment and the tinctures are wrong, as the shield is Or and the water bougets Sable, whilst the boar's head should be at the fess point.) The crest appears to be a demi-otter, which I am not aware of being otherwise attributed to Rose of Kilravock.

3. *Gordoun of Carneburrow*. Azure, a crescent between three boars' heads erased Or. Crest, a stag's head coupé proper attired Or.

4. *Falconer of Halcortoun*. Gules, a stag trippant between three mullets

Or. (It looks rather as if the stag was depicted as being seized by the head of a falcon projecting over its back.) Above the shield is placed an antique crown Or, the rim charged with four mullets Gules, and for crest a falcon volant proper.

5. *Young of Kinminitie.* Argent, three piles Sable, each charged with an annulet Or. Crest, a hand couped holding a sword in pale smoking all proper.

6. *Gordoun of Daach.* Azure, a mullet between three boars' heads erased Or. Crest, a stag's head couped proper attired Or.

7. *Duff of Terrisoull.* Vert, a fess dancetté Ermine between a stag's head cabossed in chief and two escallops in base Or. Crest, a stag's head couped affrontee proper attired Or.

8. *Pettindreich of that Ilk.* Argent, a saltire engrailed cantoned between four roses Gules. Crest, a rose-bush in flower proper. (The arms are those of Lennox, and are not those associated with the house of Pittendreich at all, which in fact seems to have borne otters' heads, according to the old sixteenth-century *seize quartiers* of Barclay, author of the *Argenis* (*House of Barclay*, vol. ii. p. 122).)

The Mantlings are all Gules doubled Argent, and the gold has turned a bright copper-green.

VIII.

SCOTTISH EPISCOPAL COMMUNION TOKENS. BY R. KERR, M.A., F.S.A.SCOT., CURATOR OF COINS, AND THE REV. J. A. LAMB, B.D., PH.D., F.S.A.SCOT.

The lists of Scottish Episcopal communion tokens published by the Rev. Robert Dick, in *Scottish Communion Tokens, other than those of the Established Church* (1902), and by James Anderson, in *Communion Tokens of the Northern Counties of Scotland* (1906), valuable though they were as pioneer work, are known to those interested in the study of communion tokens to be incomplete, and, in certain particulars, inaccurate. In this paper we present a corrected and augmented list of Episcopal tokens, together with an outline of the history of Episcopacy in Scotland. The latter, besides serving as a background to the tokens, sets forth the considerations which have determined the inclusion in, or exclusion from, our list of particular tokens.

What is an "Episcopal Token"? It might be thought that the answer should be easy—that it is a token belonging to a congregation of an Episcopal Church. But in actual fact the answer is not so easy as that, as will appear

when we consider the following points arising out of the history of the Scottish Church.

The Reformation of the Church in Scotland took place in 1560, and the old regime was abolished. Nevertheless it appears that during the remainder of the sixteenth century some of the prelates were still acknowledged as such. For a time there was a struggle between the ideas of presbytery and episcopacy. Though the Second Book of Discipline, accepted by the General Assembly in 1581, but not receiving parliamentary sanction, laid down a presbyterian constitution for the Church, yet this did not end the matter, and there was continued conflict, the details of which need not concern us here. Suffice it to say that in 1606 the Scottish Parliament restored the estate of bishops, and gradually the courts of the Church if not the whole people mostly came to accept this. The Church was then episcopal from about 1610 to 1638, in which latter year the famous Glasgow Assembly abolished episcopacy and restored presbytery. In 1661, at the Restoration of the Monarchy, the tables were turned, and the Second Episcopacy lasted from 1661 to 1688, the date of the Revolution, though Presbyterianism was not established by law till 1690. Since that date the Church of Scotland has been presbyterian in constitution, and Episcopalians have been "dissenters." Indeed from 1690 to 1712 Episcopacy was illegal, the Toleration Act of 1712 ending that state. Episcopal worship has been legal since then, though for a time after the Rebellions of 1715 and 1745 certain disabilities were laid on the Episcopal group because of their sympathy with the Jacobites, as by the Acts of Parliament of 1719 and 1748. These penal laws were repealed only in 1792.

These facts will help us when we face some of the difficulties that arise in connection with "episcopal" tokens. The two episcopacies lasted from 1610 to 1638, and 1661 to 1688, during which periods the Church of Scotland was constituted on an episcopal basis. It might be said that tokens belonging to these periods should be called episcopal tokens. But they actually belong to the Established Church of Scotland, and so we regard them as "Parish" rather than "Episcopal." In fact it does not appear that any token can be identified as belonging to the first Episcopal period, but an example from the second period is the dated token of Brechin 1678 (Brook 133: Dick 984). This was struck apparently in honour of the promotion of the Rev. George Halliburton to the See of Brechin, which he held till 1682, being at the same time minister of the charge of Brechin. Brook classes this as Parish, and Dick classes it as Episcopal, and in a sense both are correct, but in order to avoid such duplications we call this Parish. Another example is the Fintray token (Brook 424: Dick 995). This token has on it the initials of Alexander Forbes, who was minister of Fintray 1681 to 1693 (dates as in the *Fasti* of the Church of Scotland). He began his ministry in an episcopal period and apparently continued beyond it. Again,

since this is an Established Church token, it is to be regarded as Parish. Other similar cases in Dick's list are Nos. 994 (Brook 414) and 999 (Brook 433). The principle of nomenclature used here is therefore to call tokens Parish when they belong to the Church of Scotland, whether in an episcopal or a presbyterian period, and to retain the term Episcopal for those belonging to the Episcopal Church of Scotland as apart from the Established Church.

With regard to the period 1638 to 1661 the Church was then presbyterian, and there should be no difficulty about saying that any Church of Scotland tokens of this time are Parish. It is true that in certain parts of the country some Episcopal ministers kept to their parishes, and this might have led to difficulty, because, though the Church was presbyterian, these ministers would be both Parish and Episcopalian. But as it happens, there are no tokens here to raise this difficulty.

As to the period after 1688 when the Church became presbyterian once more, many of the Episcopal ministers again retained their parishes, especially in the North. Thus Luceock¹ says: "A vast number (of clergy) north of the river Tay, being strongly Episcopalian, and having the influential laity with them, were left in undisputed possession." How long that went on it is difficult to say, except by reference to the history of particular congregations. No doubt in most cases the ministers simply remained till their death, but then a presbyterian would succeed. Here again it is fortunate that no actual difficulty arises.

Finally, there is the problem of undated tokens, and those without indication, as by initials, of the minister. Sometimes local records may help in such cases, but the unfortunate thing is that local records are often fragmentary or difficult of access, and even where they are fairly complete, tokens are often scarcely mentioned, and, if they are, the markings are seldom described.

One feature that has been regarded as usually indicating an Episcopal token is the presence of a Cross on the token. Consider, for example, the tokens of Lamington and Wandel (Brook 702 and Brook 701, our No. 40). Both are triangular, the former marked L-C, the latter L-+. It is assumed that the former is Parish and the latter Episcopal because of the Cross. Another case of this is the Longside tokens—Brook 761 is marked L-S, and Dick 1009 (our No. 43) is marked L+S. Here again the former is called Parish and the latter Episcopal because of the Cross. It is not known, however, whether these attributions can be proved by evidence. It is to be admitted that most tokens known to be Episcopal are marked with a Cross, as will be noticed in the following list. The consequence is that an unidentified token with a Cross on it is presumed to be Episcopal until evidence in a different direction is forthcoming. An example is the token marked G/MT (our No. 67).

¹ *The Church of Scotland*, p. 246.

It is evident, then, that there must be in some cases a good deal of doubt, until some direct evidence is discovered to settle the problem, and the writers of this paper will be most grateful for any information that tends to confirm the notes following or leads to fresh identifications.

We are grateful to those museum and library officials, private collectors, ministers, and others who have assisted us in the preparation of this paper; and especially to those who have courteously accorded us the privileges of examining their collections, and lending us such tokens as we wished to have drawn. Amongst these we wish particularly to thank the Keeper of the National Museum of Antiquities, the Director of the Royal Scottish Museum, and the Curator of the Perth Museum and Art Gallery; the Librarian of the University of St Andrews; J. R. Lockie, Esq., F.S.A.Scot., Paisley; Archibald McLean, Esq., F.S.A.Scot., Bridge of Allan; Miss M. C. McNaught, St Mary's Cathedral, Edinburgh; the Very Rev. J. S. McArthur, B.D., Millport; and the Rev. A. R. Taylor, M.A., F.S.A.Scot., Aberdeen.

The tokens illustrated in the plates appended to this paper have been very carefully drawn by Mr A. J. Lothian, F.S.A.Scot., Technical Assistant in the Art Department of the Royal Scottish Museum.

REFERENCES.

The abbreviated references made in this paper to works on communion tokens may be expanded as follows:—

- ANDERSON . . . *Communion Tokens of the Established Church in Northern Counties of Scotland.* By James Anderson. 1906.
- BROOK " *Communion Tokens of the Established Church of Scotland: Sixteenth, Seventeenth and Eighteenth Centuries,*" by A. J. S. Brook, F.S.A.Scot. *Proc. Soc. Ant. Scot.*, vol. xli., 1906-7.
- DICK *Scottish Communion Tokens, other than those of the Established Church.* By the Rev. Robert Dick, F.S.A.Scot. 1902.
- KERR and LOCKIE . " *Communion Tokens of the Church of Scotland: Nineteenth and Twentieth Centuries,*" by R. Kerr, F.S.A.Scot., and J. R. Lockie, F.S.A.Scot., *Proc. Soc. Ant. Scot.*, vol. lxxvii., 1942-3.

ABBREVIATIONS.

The following abbreviations are used in the course of the list below:—

C.c.	Cut corners.	Obv.	Obverse.	Rd.	Round.
Ob.	Oblong.	Ov.	Oval.	Rev.	Reverse.
		Sq.	Square.		

MEASUREMENTS.

Sizes are given in sixteenths of an inch.

ALPHABETICAL LIST OF TOKENS.

1. ABERDEEN (St. John's). *Obv.* Latin cross; around, **CHRIST DIED FOR US**. Table-number 1 incuse below cross. *Rev.* **ST JOHN'S | CHAPEL** Upright ov., 18 x 13. Dick 973. Illustration 1.

2. ABERDEEN (St. Paul's). *Obv.* **ST PAUL'S | CHAPEL. | ENGLISH | EPISCOPAL;** at left and right, vertically, **FOUNDED 1722** *Rev.* **ABERDEEN | 1844** Ob., c.c., 17 x 14. Dick 974. Illustration 2.

3. ABERDEEN (St. Paul's). As preceding token, but of more recent manufacture; the inscription "**FOUNDED 1722**" is omitted. Dick 975. Illustration 3.

4. ARBROATH. *Obv.* **+A+B+ | +M+** (the stops are four-pointed stars), the initials probably for Arbroath Meeting-house. *Rev.* **1710**, with scroll ornament below. Shape irregular, but approximating to sq., c.c., 11. Dick 978. Illustration 4.

5. ARBROATH. *Obv.* **A B | M** | 1729, the initials probably for Arbroath Meeting-house. *Rev.* **M | I G**, with a four-pointed star below each of the last two letters. The initials for Mr John Grub, the incumbent. (See No. 39, below.) Border each side. Sq., 10. Dick 979. Illustration 5.

6. ARBROATH. *Obv.* **C**, with cross to right, the initial probably for Church. *Rev.* **M | H E**, probably for Mr Henry Edgar, incumbent 1732-1768 (Bishop in 1759). Inner beaded border, and outer linear border, both sides. Rd., 14. Dick 976. Illustration 6.

The ascription of this token by Dick to "Hugh Eglinton, 1615" is difficult to understand. No Hugh Eglinton was ever minister of Arbroath Episcopal Church, and in 1615 the minister was Henry Philp. If this token is Episcopal and belongs to Arbroath, then it is likely that "H E" stands for "Henry Edgar."

7. ARBROATH. *Obv.* **C | A B**, for Church of Arbroath, in script capitals. *Rev.* **MR | J. T** | 1768, the initial letters being script capitals, for Mr James Tomlinson, minister from about 1760 to 1769. Border both sides. Sq., 11. Dick 981. Illustration 7.

According to "Notes on Episcopacy in Arbroath," by Isabella Logie (Arbroath, 1904), p. 82, this is "the only token representing the Arbroath 'Qualified' or English Episcopal congregation, which began its existence probably about 1760 and was united with the Scottish Episcopal Church in 1806. James Tomlinson was the first minister of the 'Qualified' Chapel. He resigned in 1769."

8. ARPACHELIE. *Obv.* Latin cross. *Rev.* **M | W P | 1781**, for Mr William Paterson, ordained in 1780, and appointed Dean of the Diocese of Ross and Argyll in 1784. Upright ob., 13 x 12. Dick 982. Illustration 8.

This token was used by the Rev. James Paterson, son of the above Dean William Paterson, during his incumbency at Ballachulish, from 1839 to 1847.

9. BANFF. *Obv.* Saltire incuse; incuse serrated border. *Rev.* blank. Sq., 11. Dick 983. Illustration 9.

10. BRECHIN. *Obv.* **I H S**, for Jesus Hominum Salvator, the **S** retrograde. *Rev.* **A D**, for Alexander Davidson, incumbent 1770-1786. Rd., 16. Dick 985. Illustration 10.

For the reasons given in the introduction, we regard the token of Brechin 1678 (Dick 984; Brook 133) as belonging to the Established, not the Episcopal, series.

11. BROUGHTY FERRY. *Obv.* On band formed by two beaded ovals, **ST MARY'S CHURCH BROUGHTY FERRY**; on edge, maker's name, **KIRKWOOD, EDIN.** *Rev.* **I H S** in plain block capitals in relief on multi-rayed star; beaded border. Ov., 20 x 14. Dick 986. Illustration 11.

BUCKIE. See Stock Token No. 62.

12. CAMPBELTOWN. *Obv.* A Latin cross in relief. *Rev.* Incuse of obverse. Thin sheet-iron. Sq., c.c., 14. Dick 987; Brook 154. Illustration 12.

13. CRAIL. *Obv.* **I H S**, with small Latin cross below. *Rev.* **M | R L**, within circle, for Mr Robert Lyon, incumbent from at least 1721 to 1740, or for Mr Robert Lindsay, 1741-1770. Rd., 11. Dick 988. Illustration 13.

14. CRUDEN. *Obv.* **I S**, for James Stephen, incumbent 1802-1807; serrated border. *Rev.* blank. Sq., 12. Dick 989. Illustration 14.

15. DUNDEE (St. Paul's). *Obv.* **I H S**, in plain block capitals; floral ornament above and below. *Rev.* **ST P.**, for St. Paul's, in plain block capitals; floral ornament above and below. Ov., 15 × 12. Dick 990. Illustration 15.

16. DUNDEE (St. Paul's). As preceding token, but not from the same dies, and smaller. 13 × 11. Dick 991.

17. DUNDEE. *Obv.* **DUNDEE** | 1782, the first line curving with the upper edge; below, a star. *Rev.* A bishop's mitre. Rd., 10. Dick 992. Illustration 17.

18. EDINBURGH (All Saints'). *Obv.* A pelican in her piety (feeding her young with blood from her breast); around, above, "**MY BLOOD IS DRINK INDEED**". *Rev.* Chalice; around, above, "**MY FLESH IS MEAT INDEED**". Upright ov., 21 × 18. Dick 993. Illustration 18.

Dick refers to the use of this token in many of the High Churches in England.

Amongst the tokens in the Lumsden Collection at Aberdeen University is an ob. c.c. specimen with *obv.* **ALL SAINTS** | **PARISH** | 1838, and *rev.* **THIS DO**, etc. Capt. Lumsden attributed this to All Saints' Episcopal Church, Edinburgh. The present incumbent of the charge, however, assures us that the token cannot have any connection with his Church, which was not built till after 1838. We do not know the origin of this token, which appears to be unique.

19. EDINBURGH (Old St. Paul's). *Obv.* **M** | **R T**, with border. *Rev.* blank. Sq., 12. Not in Dick. Illustration 19.

20. EDINBURGH (Old St. Paul's). *Obv.* **M** | 1714, with border. *Rev.* blank. Sq., 10. Not in Dick. Illustration 20.

21. EDINBURGH (Old St. Paul's). *Obv.* The capital letters **C G** interlinked back to back; below, 1719. With border. *Rev.* blank. Sq., 10. Not in Dick. Illustration 21.

22. EDINBURGH (Old St. Paul's). *Obv.* **I H S** above Latin cross. *Rev.* **I COR.** | **XI.** 28.29 | **A.A.** Border both sides. Sq., 13. Not in Dick. Illustration 22.

23. EDINBURGH (Old St. Paul's). *Obv.* **C C** with small crude dagger-like cross between the letters; with border. *Rev.* blank. Sq., 17. Not in Dick. Illustration 23.

The origin of the five tokens (Nos. 19 to 23) listed above is doubtful. They are attributed to Old St. Paul's Church, Edinburgh, because of the fact that specimens of them have been preserved, and probably have been used, there. The initials inscribed on them do not correspond to those of former incumbents of the charge. It may be that these tokens were originally made for other congregations. This possibility is supported by the fact that amongst the tokens preserved at the Church are a number of those of Lochlee (No. 42 in this list). In this connection the following remarks made by Dick (p. 97) are of interest:—

"It was a common practice for communicants in going from one district to another to carry a token with them to serve as a certificate of membership, and one minister tells me he had as many as eight or ten different varieties received in this way, which he used indiscriminately in his own congregation; and, indeed, most of the clergymen seem to have had other tokens mixed up with their own."

Mr L. Ingleby Wood, in "Scottish Pewter-Ware and Pewterers," illustrates (p. 112) "A very rare set of tokens belonging to the Church of Old St. Paul's, Edinburgh." His set consists of nine tokens, of which five are our Nos. 19 to 23 above; one is of Crail (No. 13 in this list); and one is of Lochlee (No. 42 in this list). Of the other two tokens illustrated by Wood (square pieces inscribed "**C C**" and "**H**" respectively) we have not been able to find any specimens; neither of them is to be found at the Church itself or in any collection to which we have had access.

24. ELLON. *Obv.* **M** | **I K** | **E**, for Mr John Keith, Ellon, incumbent 1715 to 1720. Within double ob., c.c. border. *Rev.* blank. Upright ob., 13 × 12. Not in Dick. Illustration 24.

A specimen of this rare token is in the Lumsden Collection at Aberdeen University. Nothing seems to have been recorded about the history of the token, but we have accepted

Capt. Lumsden's attribution of it to Ellon because the initials appear to make it likely. The token is not now known at Ellon Church.

25. **ELLON.** *Obv.* **E N**, separated by a Latin cross of the same height as the capitals; double line above and below; with border. *Rev.* blank. Sq., 11. Not in Dick. Illustration 25.

26. **ELLON.** *Obv.* Incuse device consisting of a Latin cross standing on a crescent, forming a figure resembling an anchor. *Rev.* blank. Upright ob., 11 × 10. Not in Dick. Illustration 26.

For the reasons given in the introduction, we regard the tokens of Fern, Angus (Dick's "Fearn," No. 994; Brook 414) and Fintray (Dick 995; Brook 424) as belonging to the Established, not the Episcopal, series.

FOCHABERS. See Stock Token No. 62.

27. **FOLLA RULE.** *Obv.* Latin cross. *Rev.* **M | A P**, for Bishop Arthur Petrie, the incumbent, 1763-87. Border both sides. Sq., 13. Dick 996. Illustration 27.

28. **FOLLA RULE.** *Obv.* Latin cross. *Rev.* Large **M**, for Meikle Folla, the old name of the Church. Border both sides. Sq., 12. Dick 997. Illustration 28.

29. **FORFAR.** *Obv.* Latin cross; below, **I H S**. *Rev.* **FORFAR 1754**, curving with edge, above and below; in centre, script initials **G S**, for George Skene, incumbent 1754-1797. Rd., 12. Dick 998. Illustration 29.

30. **FORFAR.** *Obv.* **I H S** in centre of field, with small equal-limbed cross with expanded terminals above, touching the top of the letter H. *Rev.* **FORFAR 1754**, curving with edge, above and below; in centre, script initials **G S** for George Skene. Dies quite different from those of preceding token. Rd., 11. Not in Dick. Illustration 30.

For the reasons given in the introduction, we regard the token of Forfar, 1687 (Dick 999; Brook 433) as belonging to the Established, not the Episcopal, series.

FORGUE. See Stock Token No. 62.

31. **FRASERBURGH.** *Obv.* Latin cross, flanked by letters **C F**, for Chapel of Fraserburgh; double border. *Rev.* blank. Ob., 16 × 14. Not in Dick. Illustration 31.

32. **FRASERBURGH.** *Obv.* Latin cross flanked by letters **C F**, for Chapel of Fraserburgh; trefoil at each corner. With border. *Rev.* blank. Ob., 12 × 11. Dick 1001. Illustration 32.

33. **FRASERBURGH.** *Obv.* **C**, for Chapel. *Rev.* plain cross. Border both sides. Sq., 8. Not in Dick. Illustration 33.

34. **FYVIE.** *Obv.* **I H S**, with tall Latin cross, the upright of which bisects the letter H. *Rev.* **A C W | FYVIE**, for Alexander Christie, Dean of Aberdeen (1784-1827), Woodhead (Chapel). Cross between **C** and **W**, and star between the first and second lines. Border both sides. Sq., 15. Dick 1002. Illustration 34.

GASK. The ivory discs inscribed in Old English lettering "Gask Chapel" have been regarded by some collectors as communion tokens. Careful enquiry has failed to produce evidence that these discs were so used.

35. **GLASGOW (St. Andrew's).** *Obv.* Chalice enclosed in pointed oval; around **+S. ANDREW'S (EPISCOPAL) CHAPEL, GLASGOW.** Below **J.F.S.G. | 1750.**, for Dr J. F. S. Gordon (incumbent 1844-1890), the date being that of the building of the chapel. *Rev.* **LET A MAN | EXAMINE | HIMSELF & C. | I. COE. XI. 28.29.**, all within beaded border with floral ornaments at corners. Ob., c.e., 17 × 12. Dick 1003. Illustration 35.

KETH. See Stock Token No. 62. According to Dick, from 1800 to 1850 the Peterhead token No. 55 was used here.

36. **KIRKDEN.** *Obv.* **K** (for Kirkden) with three dots, one behind and two in front, all within circle. *Rev.* blank. Rd., 11. Dick 977. Illustration 36.

37. **KIRKDEN.** *Obv.* **K** (for Kirkden), with four dots, one behind and one in each of the angles of the letter, all within circle. *Rev.* blank. Rd., 11. Not in Dick. Illustration 37.

38. KIRKDEN. *Obv.* **K** (for Kirkden) with four dots, one behind and three arranged to form a triangle in the central angle of the letter, all within circle. *Rev.* blank. No specimen of this token is known to us, but Mr J. R. Lockie, F.S.A.Scot., Paisley, has a rubbing. Not in Dick.

39. KIRKDEN. *Obv.* **KIRK | DEN.** *Rev.* **M | I G**, for Mr John Grub, who ministered at both Kirkden and Arbrouth soon after 1715. *Ob.*, c.c., 13 × 10. Dick 980. Illustration 39.

40. LAMINGTON. *Obv.* Small cross, incuse. *Rev.* **L**, incuse. Triangular, 12 × 11. Dick 1005; Brook 701. Illustration 40.

41. LHANBRYDE. *Obv.* **J H S** in small capitals above a cross with expanded terminals. *Rev.* Large **L**, for Lhanbryde. Border both sides. *Ob.*, 14 × 13. Dick 1006. Illustration 41.

42. LOCHLEE. *Obv.* A small cross with expanded base; below, **I H S** *Rev.* **M | J B**, for Mr J. Brown, incumbent 1762-66. *Rd.*, 15. Dick 1007. Illustration 42.

We regard the oval token with *obv.* **LOCH | LEE** and *rev.* blank (Dick 1008) as belonging to the Established series. Compare illustration 194 of a square Lochlee token in Kerr and Lockie's *Unpublished Tokens of the Church of Scotland*, in *Proc. Soc. Ant. Scot.*, vol. lxxv.

43. LONGSIDE. *Obv.* **L S**, with small Latin cross between the letters, for Longside. With border. *Rev.* blank. *Sq.*, 8. Dick 1009. Illustration 43.

44. LONMAY. *Obv.* Large **L**, (for Lonmay) with Latin cross with expanded terminals; double border. *Rev.* blank. *Sq.*, 13. Dick 1010. Illustration 44.

45. LONMAY. *Obv.* Large **L** (for Lonmay) with Latin cross with expanded terminals. There is no inner border, and both **L** and cross are considerably larger than on the preceding token. *Sq.*, 13. Not in Dick. Illustration 45.

METHLICK. The tokens of 1776 and 1848 (Dick 1011 and 1012) belong not to the Episcopal, but to the Established Church, series. (Brook 802: Kerr and Lockie 967.) There was no Episcopal congregation at Methlick at either of the dates concerned.

46. MONTROSE. *Obv.* Latin cross; around, **CHR. MORT. PRO. NOBIS.**, i.e. Christ died for us. *Rev.* Within small oval, **J.D.**, for John Dodgson, incumbent 1815 to 1845; arched above, **ST PETER'S**; sagging below, **MONTROSE**; at bottom, **1836**. Serrated border both sides. Upright ov., 16 × 14. Dick 1013. Illustration 46.

N.B.—Dick's *oblong* is presumably a mistake; we have not seen an oblong specimen.

47. MONYMUSK. *Obv.* Latin cross, with **A** to left and floral ornament to right; dot in each top corner; with border. *Rev.* blank. Upright ob., 10 × 11½. Dick 1014. Anderson, *Pl. XXIV.*, No. 8.

The Rev. J. Andrew was minister in 1800. The initials may be his. Dick seems to have mistaken the floral ornament for a Y.

48. MONYMUSK. *Obv.* Latin cross, with six-pointed star to left and **M** (for Monymusk) to right; dot at each corner. *Rev.* blank. *Sq.*, 12. Dick 1015. Illustration 48.

49. MUTHILL. *Obv.* **M**, for Muthill. *Rev.* **1703**. *Sq.*, 9. Not in Dick. Illustration 49. The date on *rev.* may appear horizontally at the top or centre, or diagonally across the token. A specimen with *rev.* blank has also been recorded.

The following note is extracted, by permission, from the Rev. A. R. Taylor's descriptive catalogue of his own collection of communion tokens, now at St. Andrews University.

Writing on 17th October 1932, the Rev. J. L. Findlay, Rector of Muthill, states that in the museum of St. Ninian's Cathedral, Perth, there is a small red bag containing 30 tokens, with "M" on each of them, and that with them is the following explanation: "Bag containing tokens given to Communicants in the Parish of Muthill, Perthshire, during the persecution, dated 1703. This bag was greatly valued by the Rev. Alex. Cruickshank, incumbent of Muthill, born 1750, and from him descended to his great-nephew, the Rev. Alex. Lindrum. The bag was mended by his own hands. The draw-cord is made of human hair, believed to be that of one of the Stuarts, probably Charles Edward."

50. OLD DEER. *Obv.* **O.D** (for Old Deer) above small Latin cross, all within circle. *Rev.* blank. *Sq.*, 10. Dick 1016. Illustration 50.

51. OLD DEER. As preceding token, but with four-pointed star at each corner, outside the circle. Not in Dick. Illustration 51.

52. OLD MELDRUM. *Obv.* **I H S**, with tall Latin cross, the upright of which bisects the letter **H**. *Rev.* **Mr | I G**, with small crude cross between the last two letters. The incumbent's full name is not known. Traces of border both sides. Sq., 14. Not in Dick. Illustration 52.

53. OLD MELDRUM. *Obv.* **I H S**, with tall Latin cross, the upright of which bisects the letter **H**. *Rev.* **M | I C**, with small Latin cross between the last two letters. The incumbent's full name is not known. Serrated borders. Sq., 13. Dick 1017. Illustration 53.

54. OLD MELDRUM. *Obv.* As preceding token, but the letters **I H S** are considerably smaller. *Rev.* As preceding token, but the letters are somewhat smaller, and the cross between **I** and **C** has four arms of equal length. Serrated borders. Sq., 13. Not in Dick. Illustration 54.

PERTH. In G. T. S. Farquhar's "Episcopal History of Perth" (Perth, 1894) at p. 138 there is a reference to tokens for the Episcopal congregation in Perth having the initials R.L. on them. The initials are those of Robert Lyon, who was minister from 1739 to 1745, joined Prince Charles in the '45, was captured, and was executed at Penrith in 1746. This clergyman is not the same person as the Rev. Robert Lyon of Crail. (See No. 13.) The Robert Lyon of Perth was only colleague to an old man (the Rev. Laurence Drummond), and trouble arose through some of his actions, among which was the putting of his own initials on the tokens. Unfortunately no detailed description of these tokens is given. No specimens are now known.

55. PETERHEAD. *Obv.* **CH | PHD** (for Chapel, Peterhead) with Latin cross between **C** and **H**. With border. *Rev.* blank. Sq., with rd. corners, 12. Dick 1018. Illustration 55.

56. PETERHEAD. *Obv.* Latin cross; around, **CHR. MORT. PRO. NOBIS.**, i.e. Christ died for us. *Rev.* **St | PETER'S | PHD** Serrated border both sides. Upright ov., 16 x 14. Dick 1019. Illustration 56.

57. PETERHEAD. *Obv.* Cross; below, **I H S**, the cross-bar of the **H** lozenge-shaped. With border. *Rev.* blank. Sq., 10. Dick 1020. Illustration 57.

PORTSOY. See Stock Token No. 62.

RATHVEN. See Stock Token No. 62.

58. REDMYRE. *Obv.* Latin cross, between small capital letters **I** and **C**. *Rev.* **R**, for Redmyre. Border both sides. Sq., 12. Dick 1022. Illustration 58.

The Rev. A. R. Taylor, F.S.A.Scot., has kindly permitted us to quote the following extract from his catalogue. In a letter, dated 14th October 1932, the Rev. Thos. J. Hollands, Rector at Laurencekirk, writes: "Redmyre was a meeting place of the Laurencekirk Episcopal congregation. After the destruction of the Episcopal Chapel in Laurencekirk by the Duke of Cumberland's soldiers in 1746, the congregation met at Hill of Haulkerton until 1760, when the place of meeting was changed to Redmyre, under the same clergyman, John Strachan, who had officiated since 1752. He was succeeded by Robert Spark, who ministered at Redmyre from 1780 until the new Episcopal chapel, built by Lord Gardenston, was opened in 1791 in Laurencekirk, when the Redmyre meeting-place was given up, and the congregation divided between Laurencekirk and Drumlithie, to which latter place Mr Spark was then transferred.

"In my opinion, the letters "I C" which appear beneath the cross on the obverse of the token would most certainly stand for "Jesus Christ"; as a Church monogram this is sometimes used instead of "I H S". I do not think the letters are personal initials, first, because such might not be thought seemly in close proximity to the sacred sign of the Cross, and secondly, because they do not correspond to the name of the clergy concerned—the Rev. John Strachan and the Rev. Robert Spark being the only presbyters who ministered to the congregation at Redmyre. I should add that there are no clergy bearing these initials in the list of Stonehaven incumbents."

Mr Taylor adds: "All the Redmyre tokens, which were in the possession of the Episcopal

Church at Stonehaven, were mounted in the form of a cross and hung in the vestibule of the church there by the late Dean Christie."

It will be noted that Dick was in error in locating Redmyre in Lanarkshire.

ROTHESAY. The token ascribed by Dick to St. Paul's Episcopal Church, Rothesay (Dick 1023), is actually a token of St. Paul's Parish Church, Edinburgh. (Kerr and Lockie 434.) There are no Rothesay Episcopal tokens.

RUTHVEN. The earlier Peterhead token (No. 55) was used here, according to the Rev. J. F. S. Gordon, at p. 237 of "The Book of the Chronicles of Keith, Grange, Ruthven, Cairney, and Botriphnie." (Glasgow, 1880.)

59. **TURRIFF.** *Obv.* Latin cross, and **C** at top left corner, both incuse. No border. *Rev.* blank. Sq., 13. Dick 1024. Illustration 59.

Anderson suggests that the C stands for St. Congan's Chapel. It might equally well stand for Communion, Church, or Chapel.

60. **TURRIFF.** *Obv.* Small Latin cross. Traces of border. *Rev.* blank. Sq., 13. Not in Dick. Illustration 60.

61. **TURRIFF.** *Obv.* **I H S**, with Latin cross in the upper half of the **H**. *Rev.* **T | GG**. No borders. Sq., 14. Dick 1025. Illustration 61.

Of the letters on *rev.*, T stands for Turriff; the initials GG, however, do not correspond to those of any known incumbent of the charge. Anderson (p. 50) reads the initials as CC, and suggests that they stand for Cruickshank and Cardno, who were ministers in 1803; we are not inclined to accept this interpretation.

62. **STOCK.** *Obv.* **I-H-S** over a Latin cross with expanded terminals. With border. *Rev.* blank. Used at Arradoul, Buckie, Fochabers, Forgue, Keith, Portsoy and Rathven. Sq., 15. Dick 1000. Illustration 62.

Writing of the Episcopalians of Rathven, and in particular of the Rev. William Mitchell, who was active about the middle of the 18th century, George Hutcheson, in "Days of Yore, or Buckie and District in the past" (Buckie, 1887), says (p. 56), "Mr Mitchell's ministrations extended as far as Portsoy on the east and Fochabers on the west, both of these congregations being dependent on him for services. A few of the tokens cast during the pastorate are still in existence, as also one of those cast during the pastorate of Mr John Hay, he who was deprived of the Rathven Church at the Revolution." The "stock" token described above is presumably Mr Mitchell's product, but we have not been able to identify that of Mr Hay.

63. **UNIDENTIFIED.** *Obv.* **A M**, with Latin cross between the initials. *Rev.* 1762. Measurements unknown. Not in Dick.

This token, which we have not seen, is included on the authority of the late Mr D. Murray, who recorded it and ascribed it to Peterhead. The incumbent there in 1762 was, however, the Rev. Robert Kilgour.

64. **UNIDENTIFIED.** *Obv.* Incuse cross with equal expanded arms. *Rev.* Incuse inscription: **ST JOHN VI & LVI | He that eateth my | flesh, and drinketh | my blood, | dwelleth in me, | and I in him.** Incuse border both sides. Sq., 16. Not in Dick. Illustration 64.

This token is regarded by some collectors as being Episcopal, probably on account of the cross which it bears. We have not been able to confirm the attribution. It is doubtfully ascribed to Stonehaven.

65. **UNIDENTIFIED.** *Obv.* **M | WE**. *Rev.* blank. Sq., 9. Not in Dick. Illustration 65.

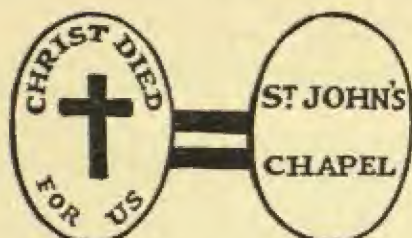
We are informed by the Rev. T. M. Patey, of the Church of St. Mary's-on-the-Rock, Ellon, that two of these tokens are preserved, amongst Episcopal tokens of various types, at his church. No minister of Ellon with the initials WE is known.

66. **UNIDENTIFIED.** *Obv.* Latin cross with expanded terminals. *Rev.* blank. Upright ob., 12 x 9. Illustration 66.

An apparently unique token preserved at Ellon.

67. **UNIDENTIFIED.** *Obv.* Latin cross, with expanded terminals. *Rev.* **G | MT**. Sq., 15. Not in Dick. Illustration 67.

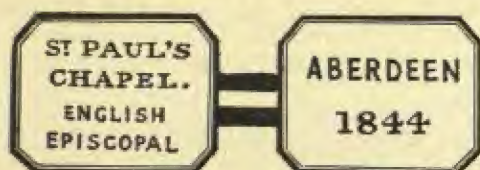
This token is in the Taylor Collection at St. Andrews University, but nothing has been recorded as to its origin.



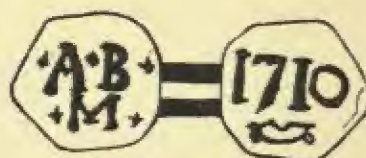
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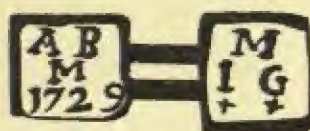
2. ABERDEEN : ST PAUL'S.



3. ABERDEEN : ST PAUL'S.



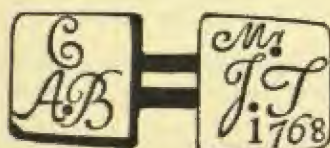
4. ARBROATH.



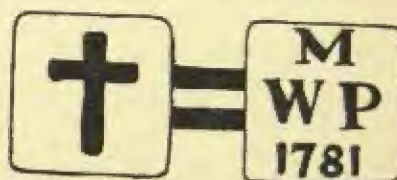
5. ARBROATH.



6. ARBROATH.



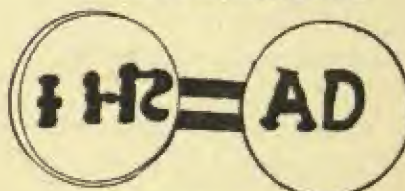
7. ARBROATH.



8. ARPAFEELIE.



9. BANFF.



10. BRECHIN.

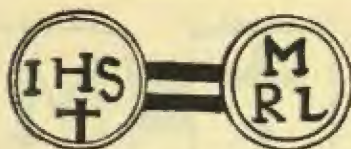
SCOTTISH EPISCOPAL COMMUNION TOKENS.



11. BROUGHTY FERRY.



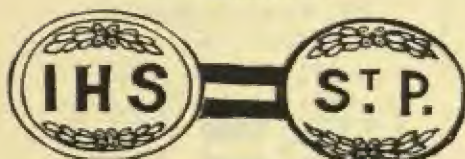
12. CAMPBELTOWN.



13. CRAIL.



14. CRUDEN.



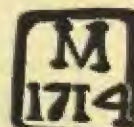
15. DUNDEE: ST PAUL'S.



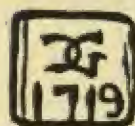
17. DUNDEE.



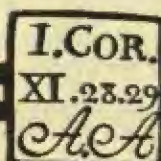
18. EDINBURGH: ALL SAINTS'.



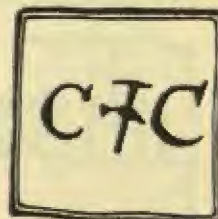
19. EDINBURGH: OLD ST PAUL'S. 20. EDINBURGH: OLD ST PAUL'S.



21. EDINBURGH: OLD ST PAUL'S.



22. EDINBURGH: OLD ST PAUL'S.



23. EDINBURGH: OLD ST PAUL'S.

SCOTTISH EPISCOPAL COMMUNION TOKENS.



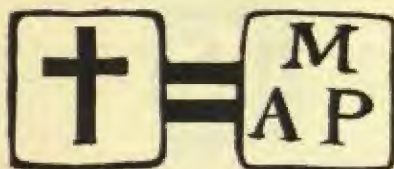
24. ELLON.



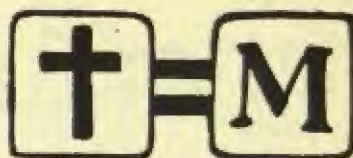
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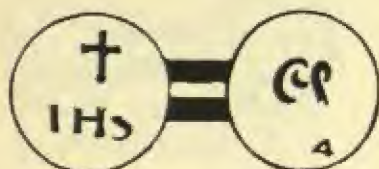
26. ELLON.



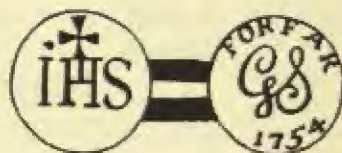
27. FOLLA RULE.



28. FOLLA RULE.



29. FORFAR.



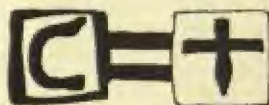
30. FORFAR.



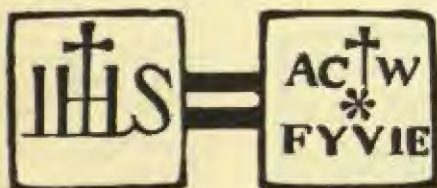
31. FRASERBURGH.



32. FRASERBURGH.



33. FRASERBURGH.



34. FYVIE.



35. GLASGOW: ST ANDREW'S.

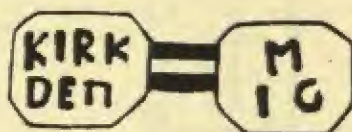
SCOTTISH EPISCOPAL COMMUNION TOKENS.



36. KIRKDEN.



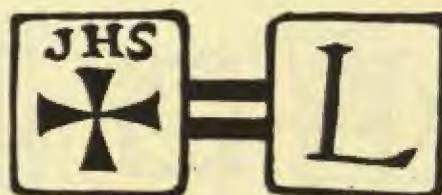
37. KIRKDEN.



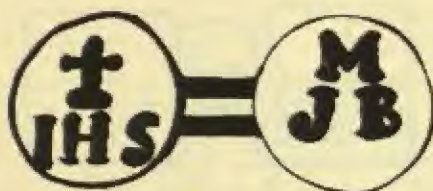
39. KIRKDEN.



40. LAMINGTON.



41. LHANBRYDE.



42. LOCHLEE.



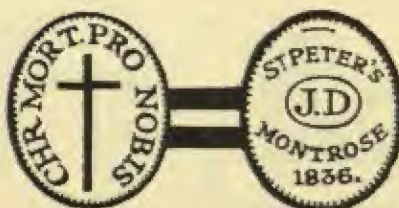
43. LONGSIDE.



44. LONMAY.



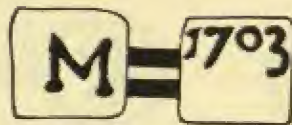
45. LONMAY.



46. MONTROSE: ST PETER'S.



48. MONYMUSK.



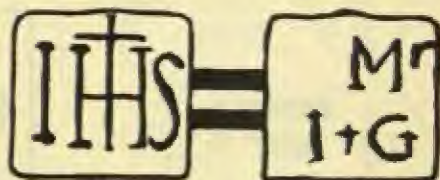
49. MUTHILL.



50. OLD DEER.



51. OLD DEER.



52. OLD MELDRUM.



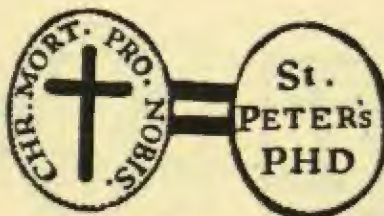
53. OLD MELDRUM.



54. OLD MELDRUM.



55. PETERHEAD.

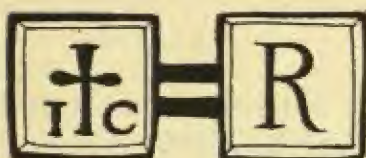


56. PETERHEAD.



57. PETERHEAD.

SCOTTISH EPISCOPAL COMMUNION TOKENS.



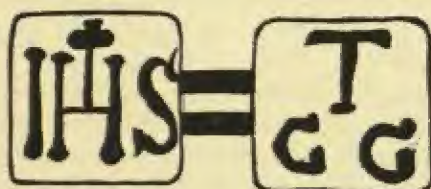
58. REDMYRE.



59. TURRIFF.



60. TURRIFF.



61. TURRIFF.



62. STOCK.



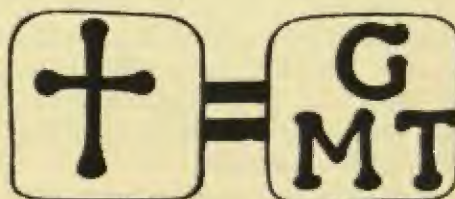
64. UNIDENTIFIED.



65. UNIDENTIFIED



66. UNIDENTIFIED.



67. UNIDENTIFIED.

IX.

NOTE ON THE BLUIDY BANNER OR HAUGHHEAD BANNER.

By Miss E. M. MEIN, B.L., F.S.A.Scot.

In a notice of "The Bluidy Banner" of Drumclog and Bothwell Brig contributed to the *Proceedings*, vol. iii. (1858-59), p. 253, Mr James Drummond gave the history of the flag as he had understood it when recounted by its then possessors, Mr and Miss Raeburn, Dunbar. Mr Drummond recorded that the flag had "belonged to Hall of Haughhead, a zealous Covenanter. . . . Hall's son, while on his death-bed, gave the banner to a zealous Covenanting friend of the name of Cochrane. His own son, having turned conformist clergyman, was considered unworthy to be the custodian of such a precious relic. This Cochrane, after wandering about from place to place, settled in Coldstream; his son, again, bequeathed the banner to his youngest daughter, Mary, who married Mr Raeburn of Dunbar, the father of the present proprietors, Mr and Miss Raeburn, now a very aged couple." Mr Drummond also referred to a chest of arms said to have been used in Covenanting times which had been given away, excepting two swords.

The banner is one of the well-known Covenanting banners, and the sentiments of the inscription on it, "No quarters for ye active enemies of ye Covenant," have caused it to be quoted frequently in support of the blood-thirsty intentions of the Covenanters at Bothwell Brig. It has continued to receive the name given to it by Mr Drummond in 1859, although it has also sometimes been called the Haughhead banner. Andrew Lang¹ thought the provenance and pedigree fairly probable in itself; and Sheriff Mark Napier, whose critical faculties, like those of Andrew Lang, were more often roused and exercised on evidence which tells against the Royalists, accepted the story and used the coloured reproduction of the flag in his *Memorials of Claverhouse*. It has subsequently been referred to by other writers.

The tradition has been challenged by Dr D. Hay Fleming, as referred to later, but otherwise the story as recounted by Mr Drummond does not seem to have been examined.

Henry Hall, the Covenanter, who died near Queensferry in 1680, and whose name is coupled with that of the Rev. Donald Cargill as one of the authors of the Queensferry Paper, discovered when he was seized, was the "onlie lawfull son"² of Robert Hall of Haughhead (died *circa* 1661) by his

¹ *History of Scotland*, vol. iii. p. 353.

² *Reg. of Deeds (Mackenzie Office)*, vol. ii. p. 591.

first wife, Helen Scott, who died in 1652. Henry had a son, Samuel, "*unicus filius legitimus*." ¹ This only son, Samuel, by his second wife, Janet Pringle, had two sons, Henry, "son and nearest heir," ² who succeeded his father in Haughhead and who was alive in Jedburgh in 1796, and James, ³ ordained by the Reformed Presbytery, otherwise the Cameronians or Macmillanites, in 1750, during his father's lifetime. James played a leading part in the troubles of this Presbytery in the April before his father died in 1753. ⁴ He died in 1781, aged fifty-five, and is commemorated by a stone immediately to the north of the Martyrs' Monument in Old Greyfriars Kirkyard. Thus the only ordained grandson of Henry Hall was ordained in a church acceptable to the irreconcilables. Samuel Hall was a follower of Mr Macmillan judging from the reference to him in Boston's *Memoirs* (Morrison's edition, 1899, p. 216), where he is mentioned by the initials "S. H. of H." as accompanying Mr Macmillan. James Hall, his second son, was therefore an eminently suitable custodian of the banner, even had his elder brother, Henry, been considered a backslider in the eyes of his father, of which there is no evidence. The touching death-bed scene of Mr Drummond's story, if it had occurred, would have taken place between two nonagenarians, Samuel dying in July 1753 in his ninety-second year, ⁵ and the Raeburns' great-grandfather would have required to have been a contemporary in order to have been an active Covenanter. The banner probably passed from the Halls to the Cochranees, but not in the way nor for the reason given by Mr Drummond.

The "conformist" grandson of Henry Hall has been identified as the Rev. George Hall (1680?–1740), minister of Linton, Roxburghshire. ⁶ George Hall is described in Scott's *Fasti* (1917 ed.) as "son of Robert Hall of Haughhead and grandson of Henry Hall the Covenanter." This is plainly incorrect in view of the foregoing facts, but he may have been the son of a half brother of Henry Hall, and a grandson of Robert by the latter's second marriage to Margaret Davidson or Young. ⁷ It is true that the Rev. George Hall died (1740) before Samuel (1753), but he could not have been a son of Samuel by an earlier marriage. The Rev. George Hall left four sons and a daughter. John, his eldest son, not mentioned in the *Fasti*, may have been dead by 1753, but he had a son, George, "Mariner at Plymouth," who was alive in 1782, ⁸ and who would have been heir to Haughhead had his grandfather George been Samuel's eldest son and heir. This disposes of the possibility of the Rev. George Hall having been the "conformist" grandson of Henry Hall.

¹ Part. Reg. Sasines, Roxburghshire, vol. vi., second series, p. 128.

² *Ibid.*, vol. xvii. p. 5.

³ Reg. of Services of Heirs, 7th December 1752.

⁴ A Breach in the Reformed Presbytery, 1753 (*Scottish Church History Society*, vol. i. p. 1).

⁵ *Tombstone, and Sheriff Court Books, Roxburgh, 1753*, p. 191.

⁶ *Berwickshire Nat. Club.*, vol. xxvi. p. 376.

⁷ Reg. of Deeds (Mackenzie Office), vol. ii. p. 591.

⁸ *Ibid.*, vol. ccxxxii. p. 477.

These are errors in the hitherto accepted story of the banner, but to leave the facts here would tend to discredit the whole tradition. It remains therefore to construct, as far as possible, the real history.

Miss Catharine Raeburn, who showed the flag to Mr Drummond, died, the last survivor of the family, on 3rd December 1868, said to be aged seventy-three, but possibly she was older. Her eldest brother, William, was ordained in the Original Secession Church, the "Old Lights," in 1804. He demitted his charge in 1837 and joined the Church of Scotland in 1839. In 1844 he sought re-admission to the Original Secession Church, but by that time his father was dead.¹ Thus it would appear that it was James Raeburn, Miss Raeburn's father, who left the banner past his son William, because he had turned "conformist clergyman."

Miss Raeburn's grandparents, John Cochrane and Elizabeth Air, were married in Coldstream in 1750, and Mary, her mother, their eldest child, was baptised 27th November 1752. A Hector Aire was in company with Henry Hall in Northumberland in 1678.² In all likelihood this was the Hector, described as eldest son of Thomas Air, Coldstream Mill,³ and it is probable that the Raeburns were descended from Henry Hall through Elizabeth Air's parents, her mother's mother mentioned later. Mary married James Raeburn and died, aged ninety-two, on 6th April 1844. The notice of her death in the *Scotsman* says: "Mrs R. (*sic*) was a most rigid Cameronian, and retained in her possession the flag of the Covenant, which was borne by her grandfather at the battle of Bothwell Brig. Although somewhat tattered, still all the emblems and inscriptions are perfectly legible. The old lady prized it beyond rubies, and has transmitted it as an heirloom in her family."

She had been born eight months before the death of Samuel Hall, and their two lives covered the span of one hundred and eighty-three years, so there is every reason to believe that Mrs Raeburn had been told by excellent authorities the story of the banner and other relics. She cannot be held accountable, however, for the accuracy or otherwise of the obituary notice.

Her daughter, Miss Raeburn, bequeathed the banner and a sword to Mr William Sinclair, a native of Dunbar, who was ultimately senior teller of the City of Glasgow Bank, and retired to Moffat. He carefully recorded in writing the information he had been given by Miss Raeburn and some other particulars. This statement says that Miss Raeburn said that the banner and the sword had belonged to Colonel Cleland, "that is the sword had been his and worn by him at the battle of Bothwell Brig in 1679. The flag had been there also, and had been carried off by him to preserve it from the enemy. Colonel Cleland had given these to his friend Henry Hall of Haugh-

¹ *Services of Heirs*, 28th October 1840; *Scott's Fasti* (Bannockburn, Old Burgher).

² *Archaeologia Aeliana*, 4th series, vol. ix. p. 38.

³ *Lauder Testaments*, vol. i. (1st June 1675).

head, near Hawick, who was progenitor of the said Catherine. . . . She herself is said to have been, when young, a tall and handsome woman. In her latter days she had a deep masculine voice and she was a good reader and evidently she was one who had received a good education. . . . In giving these relics into the care of Miss Raeburn's ancestor Colonel Cleland had stipulated that they were not to be given up save to some lineal descendant or representative of Cleland's own family." Mr Sinclair also recorded that an intimate friend of Miss Raeburn's, Mrs Angus, said that Mr Raeburn had been a well-to-do joiner and that the flag had come to Miss Raeburn from her mother's mother.

William Cleland, who was about eighteen years of age in 1679, and Henry Hall, his senior both in age and rank among the Covenanters, were both fugitives after the battle of Bothwell Brig. Hall was killed the following year, but the two young contemporaries Samuel Hall and William Cleland were passing to and fro in Scotland between 1680 and 1688. Samuel was at times with James Renwick. Indeed it seems a logical deduction from a Petition¹ to the Privy Council by "Mr Alexander Scheills, preacher of the Gospell, Samuella Hall, sone to the deceast Henry Hall of Haughhead, and John Luckup, merchant in Edinburgh," that it was Samuel Hall along with Alexander Shields who were the two friends with James Renwick when he was surprised in John Luckup's house in the Castlehill, a fact which seems to have escaped notice hitherto. Thus Samuel Hall and William Cleland were associated not only through the banner but by both being concerned in closing events of the Covenanting struggle, the capture of the last martyr publicly hanged and the last battle. William Cleland during this period is mentioned as being in company with the Rev. Alexander Peden. There were also the months between the Revolution and Colonel Cleland's death at Dunkeld when the relics could have been returned or recovered. According to the story, Cleland placed great store on the banner and sword, and it can only be wondered why he did not recover them during these ten years.

Dr Hay Fleming has drawn attention to a close similarity between this banner and a banner belonging to a party of dissidents from the United Societies in the early eighteenth century. The mottoes of this eighteenth-century banner were thought sufficiently extraordinary by the United Societies to be worth quoting in a pamphlet in confutation of a Manifesto issued by this insignificant party. Dr Hay Fleming considered that there could be no reasonable doubt of the identity of this banner with the Bluidy Banner.²

To return to the recent pedigree of the banner and sword. On the death of Mr W. Sinclair the relics passed to Mr William Speirs, who framed the flag for preservation, and left them to his stepdaughter, Miss Hannah Piers (Macckenzie) Speirs. The banner was lent by her and exhibited at the Scottish

¹ Laing MSS., vol. 350, No. 250.

² *Six Saints of the Covenant*, vol. II. p. 216.

Historical Exhibition, Glasgow, 1911. On her death the relics were left to Mr William B. Speirs and his brother Mr George R. Speirs, her nephews, to whom thanks are due for a copy of the notes made by Mr Sinclair. They presented them on 12th May 1946 to the Cameronian Regiment (Scottish Rifles).

The other sword, mentioned by Mr Drummond, and a flintlock musket, both of which had belonged to Miss Raeburn, came into the possession of John Sinclair, Esq., Solicitor, Dunbar, a nephew of Mr William Sinclair. They are said to have belonged to Henry Hall himself. The sword, an Andrea Ferrara rapier blade without the hilt, and musket, were exhibited at the Glasgow International Exhibition, 1901. Both are now in the possession of the widow of Mr Sinclair in Edinburgh.

The authenticity of the banner as a Covenanting relic will be considered by some to be sufficiently vouched for on the balance of evidence, and by others to remain an open question.

X.

EXCAVATIONS IN TWO HOMESTEADS AT CROCK CLEUCH,
ROXBURGHSHIRE. By K. A. STEER, M.A., PH.D., F.S.A.,
F.S.A.Scot., AND G. S. KEENEY, M.A., B.Litt.

Read March 10, 1947.

INTRODUCTION.

The numerous remains of ancient domestic sites on the lower slopes of Cheviot, in East Roxburghshire, constitute one of the most important and yet neglected features of the archaeology of that county. Owing to their small size and unimpressive character, more than half of these sites are omitted from the Ordnance Survey maps, while the true nature of the recorded examples is invariably disguised by the inappropriate label "Fort". The task of discriminating between the forts proper on the one hand, and the homesteads and village settlements on the other, was initiated in Roxburghshire at the end of last century by Mr Francis Lynn, who showed that out of twenty-three so-called forts, concentrated in an area of eight square miles at the head of the Bowmont Water, only six are primarily defensive works: the remainder being "enclosures which have more the character of homesteads or clusters of houses".¹

¹ *Proceedings of the Berwickshire Naturalists' Club*, 1897, pp. 185-200.

Investigations made by the officers of the Royal Commission, in preparation for the forthcoming Roxburghshire Inventory, have not only confirmed Lynn's observations, but have further emphasised the preponderance of domestic habitations. While only a single new fort has come to light in the limited area surveyed by Lynn, fifteen additional homesteads have been identified, all of which, on typological grounds, would appear to date not later than the seventeenth century.

Although these domestic sites are superficially alike in choice of situation, being strung out along the sides of the valleys of the Bowmont and Kale Waters and their tributaries, rarely above the 1000-foot contour-line, they differ widely in plan and construction, and, it may be inferred, in date. In size, they range from simple enclosures, only large enough to accommodate a single family (these are by far the most common), to one instance of a village-settlement over an acre in extent. Several sites show a striking resemblance on plan to the Romano-British settlement at Milking-Gap, Northumberland,¹ while others, situated nearer the valley-floors, and associated with extensive land-boundaries, are presumably medieval. "Scooped enclosures", of the type dated in Peeblesshire to the fifteenth or sixteenth century,² are well represented, and secondary occupation of a number of sites is suggested by the intrusion of rectangular buildings amongst the circular hut-foundations of the first period.

Despite the abundance of the remains, their outstanding importance for research into the political, social, and economic life of the Borders from prehistoric to modern times, and their suitability for small-scale excavation under normal conditions, not a single domestic site in Roxburghshire had been excavated prior to 1939, and it was largely for this reason that the excavations at Crock Cleuch were undertaken in that year. It was originally intended to resume the excavations in 1940, but, owing to the war, and the present difficulty of organising working-parties in remote areas, it seems probable that further investigation will have to be postponed for some years, and it has therefore been decided to publish an account of the work carried out so far.

TOPOGRAPHY (fig. 1).

The sites chosen for excavation are two adjacent homesteads, situated two and a quarter miles south-east of Belford and some 200 yards up the Crock Cleuch, a narrow valley whose upper limits are sharply defined by the rock outcrops of Crock Law (1338 O.D.) to the north, and Pudding Law (1403 O.D.) to the south.³ The floor of the valley, drained by a name-

¹ *Archæologia Eliana*, Ser. 4, vol. xv. pp. 303-350.

² *Proc. Soc. Ant. Scot.*, vol. lxxv. pp. 92-115.

³ O.S. 1-inch map, Sheet 81. National Grid Refs. 36/833176 and 834176.

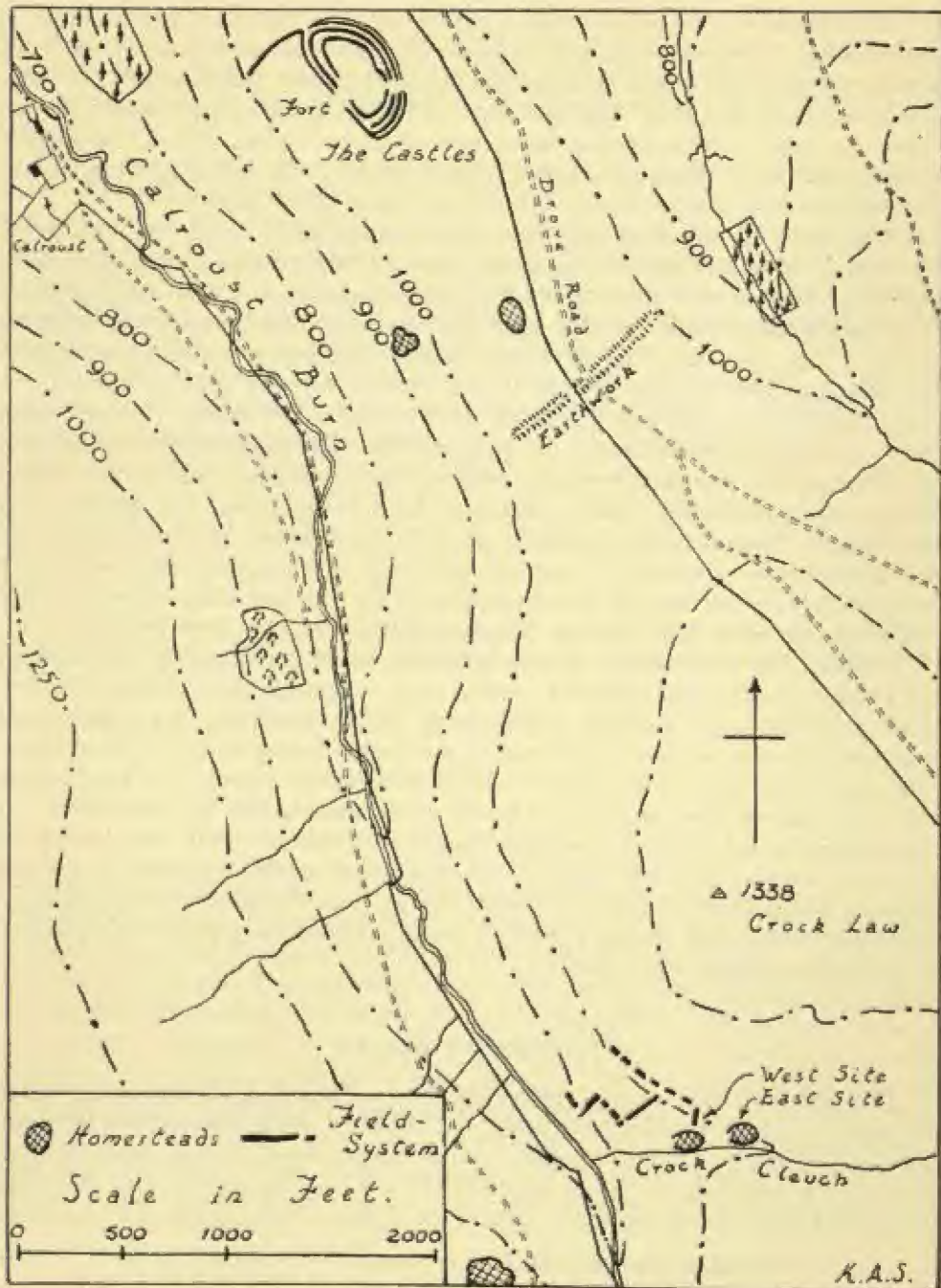


Fig. 1. The site of the Crock Clench Homesteads.

less tributary of the Calroust Burn, is covered with boulder clay, which, in its turn, is masked partly by a thin and variable deposit of glacial gravel, and partly by a wash of scree gravel from the exposed rock. These gravels combine to form narrow platforms on either side of the stream which fan out at the junction with the Calroust Burn. It is on the wider of these two platforms, on the north side of the Cleuch, that the homesteads have been erected.

The advantages of this situation for primitive settlement are obvious. The gravel subsoil is well drained, and the inference that it was free from forest at the time of the settlement is supported by the discovery of a field-system extending north-westwards from the west homestead, with which it is undoubtedly associated, for roughly 200 yards (*infra*, p. 148). Rising ground provides shelter on all sides except the west, and the stream furnishes an abundant supply of fresh water throughout the year. The easily quarried rock scarps on the face of Crock Law afford ample building material, while querns can be fashioned from the local andesitic lava and crude pottery from the boulder clay. Moreover, an important north to south communication route is near at hand. The watershed between the Calroust and Kelsocleuch Burns, whose summit is only half a mile to the east of the homesteads, carries an ancient track from Belford to the Border at Windy Gyle, and thence to Alwinton. Short linear earthworks drawn across this track at several points attest its antiquity, though whether the earthworks are prehistoric or medieval is uncertain. The track was certainly in use as a drove road in medieval times, and its existence at a much earlier date is suggested by the fact that, between the Border and Belford, it passes in close proximity to two Bronze Age cairns, the Iron Age fort known as the Castles, a homestead of early type recently discovered by the first-named writer from air photographs, and two other sites marked on the Ordnance Survey 6-inch map¹ whose remains have now been practically obliterated by cultivation.

GENERAL DESCRIPTION.

The only previous description of the sites at first hand is given by Lynn, who notes the salient features but confuses the compass-points: his west site is actually the east and *vice versa*.² The homesteads, which are 95 feet apart, are strikingly similar in plan and construction. Each consists of a dry-stone wall, 7-8 feet thick, enclosing an ovoid area, about one-eighth of an acre in extent, with the main axis running east-west. In each case the enclosure wall is pierced only by a single entrance on the west side which leads into an excavated forecourt, while the rear half of the enclosure is occupied by a terrace on which is set a large circular hut.

¹ Roxburghshire, 1923 edition, Sheet NXXI.

² *Loc. cit.*, pp. 190-191.

Though its walls have collapsed in many places, the east site is in a fair state of preservation, and all the features noted above were recognisable without excavation. From the fact that handy-sized walling-stones abound on the surface it can be inferred that no extensive stone-robbing has taken place within recent times. The west site, on the other hand, is in a much more fragmentary state, and was no doubt used comparatively recently as a quarry for the adjacent sheep-shelter.

THE EXCAVATIONS.

As sufficient voluntary labour was available, work was begun simultaneously on the two sites in the hope of confirming the superficial indications of a contemporary date. When this had been achieved, by the discovery of the same type of pottery on each of the principal hut-floors, all resources were concentrated on the more productive east site. It will be convenient to describe the excavations on each site separately.

I. EAST SITE.

(i) *The Enclosure* (fig. 2).

The east homestead stands precisely on the 1000-foot contour with its south side resting on the edge of the gully through which the stream meanders; the bed of the stream is now 10 feet 6 inches below the base of the enclosure wall.

Ovoid in shape, the enclosure measures internally 105 feet from east to west by 65 feet from north to south. The enclosure wall is well preserved on the east side, and, apart from a short sector on the south side where erosion by the stream has brought about a total collapse for 15 feet, and caused the wall to settle out of line for a further 23 feet east of the gap, its site is clearly marked by a stony mound through which facing stones can be seen *in situ* at several points. The wall is 7-8 feet thick at the base and consists of two parallel lines of Old Red Sandstone lava blocks, and occasional erratics, bound by an earth and rubble core. On the east side, the outer face is still standing to a height of 5 feet 3 inches and comprises stones of varying sizes, with those of the lowest course laid horizontally and the remainder piled on in irregular fashion (Pl. XV, 1). The northern end of the main section, however, revealed a different construction, for here the outer face is represented by two massive blocks set on end, the largest measuring 3 feet 9 inches high and 2 feet 6 inches wide. In preparation for these blocks the ground had been levelled by cutting back into the scree, and it had been necessary to insert a packing-stone under each to give stability (Pl. XV, 2, and fig. 6, A-B). Similar orthostatic boulders are visible at other points around the wall.

The inner face of the wall was only examined at the northern end of the main section. Owing to the fact that the ground falls 16 feet from the north to the south side of the homestead, the inner foundations are 3 feet below those of the outer face at this point; like the latter, they are bedded

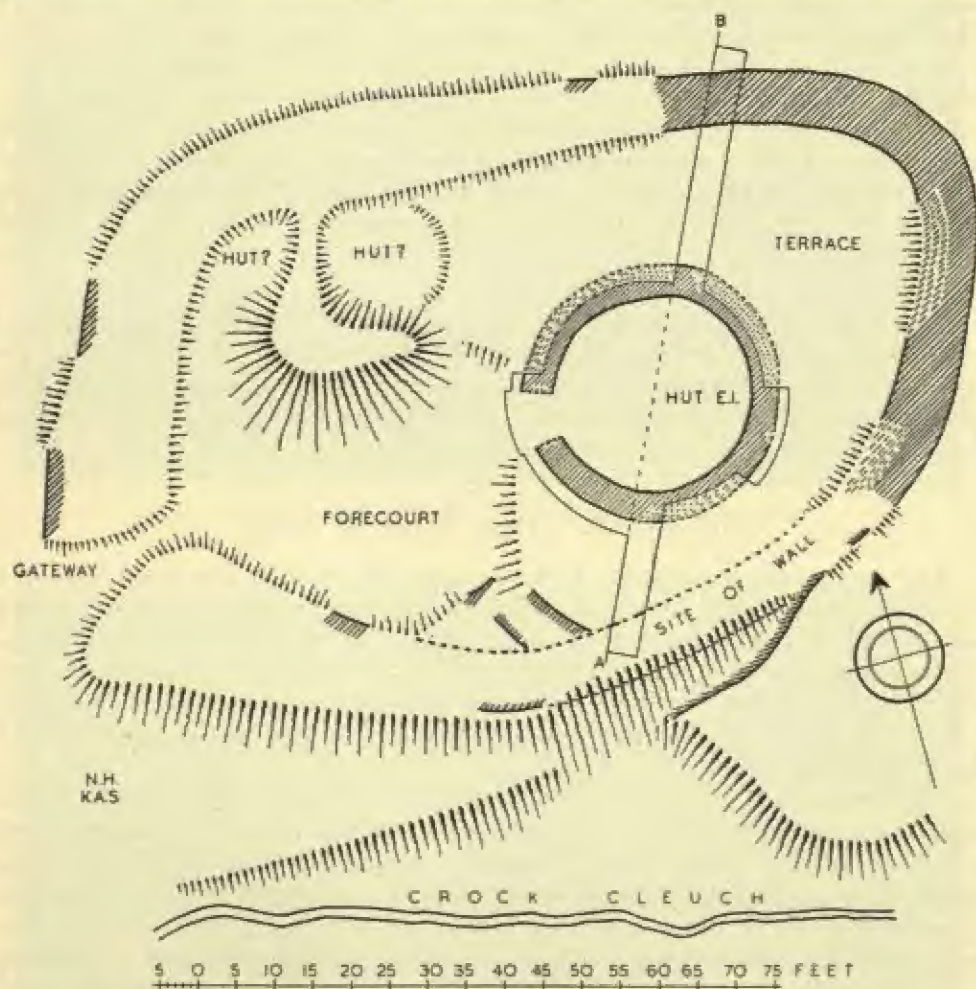


Fig. 2. East Homestead, Crock Cleuch.

in the scree and provided with a levelling course of small stones. The wall only survives to a height of 2 feet and consists of three courses of small blocks horizontally laid. The original height, however, can hardly have been less than 6 feet 6 inches, the minimum required to bring it level with the top of the outer face. The site of the entrance is clearly shown by a

gap in the west side of the enclosure wall. It was not excavated, but a trial pit in the centre suggested that it is paved. It leads directly into a court which has been hollowed out of the hill-slope and which occupies roughly a quarter of the interior. This court probably served as a stock-pen, and would incidentally improve the drainage of the rest of the site. Flanking the court, on the north, is a large stony mound, and on the narrow terrace between this mound and the enclosure wall are indications of one, or possibly two circular huts. The east side of the court is defined by a scarp which rises abruptly to a vertical height of 7 feet above the floor of the court to form the western edge of the terrace supporting the principal hut. The fragment of wall visible at the junction of the south end of the terrace and the enclosure wall may be the remains of a dividing wall which ran along the edge of the terrace; this point, however, requires further investigation.

The main section (fig. 6, A-B) shows that the homestead is erected at a point where the boulder clay obtrudes between the lower limit of the scree and the upper limit of the river gravel, though it is probable that the exposure of the boulder clay is partly due to preliminary levelling of the slope in preparation for the hut foundations.

(ii) *Hut E. 1* (figs. 3 and 6, A-B).

The main hut is circular, and measures 26 feet in diameter within a dry-stone wall which averages 4 feet thick and is built of small facing stones with a rubble core. No more than two courses survive, and the original height of the wall is problematical: the amount of tumbled walling stones in the vicinity is only sufficient to establish a minimum height of 3 feet. A broken quernstone was found incorporated in the inner face of the wall on the north side.

The entrance is situated on the east where a heavy and well-laid paved approach is carried through a gap in the wall (Pl. XVI, 1). The southern limit of the entrance is defined by the butt-end of the hut wall (the block facing the gap had tumbled out of position and is not shown on the plan), and a width of 5 feet is given by three threshold-stones, set into the ground a few inches back from the circumference of the inside face of the wall, and projecting 3-5 inches above the paving-stones on either side. The two southernmost stones show no signs of use, but the upper surface of the northernmost stone, 2 feet 5 inches long, is heavily worn, as are the two large paving stones approaching it from the west. A fourth stone, adjacent to the worn threshold-stone on the north side, is similarly set on edge into the ground, unlike the walling stones which are laid on bed. Its position in relation to the outer corner-stone of the north jamb, its unworn condition, and the fact that it was backed by rubble, show, however, that it served



1. East Homestead. Outer face of enclosure wall on the east.



2. East Homestead. Outer face of enclosure wall at the north end of the section.

K. A. STEER AND G. S. KEENEY.

[To face p. 144.



1. Hut E. 1. Entrance from the west.



2. Hut E. 1. Detail of entrance showing threshold-stones and quern re-used as paving.

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1. Hut E. 1. General view of hut paving from the east.



2. Hut E. 1. The hearth.

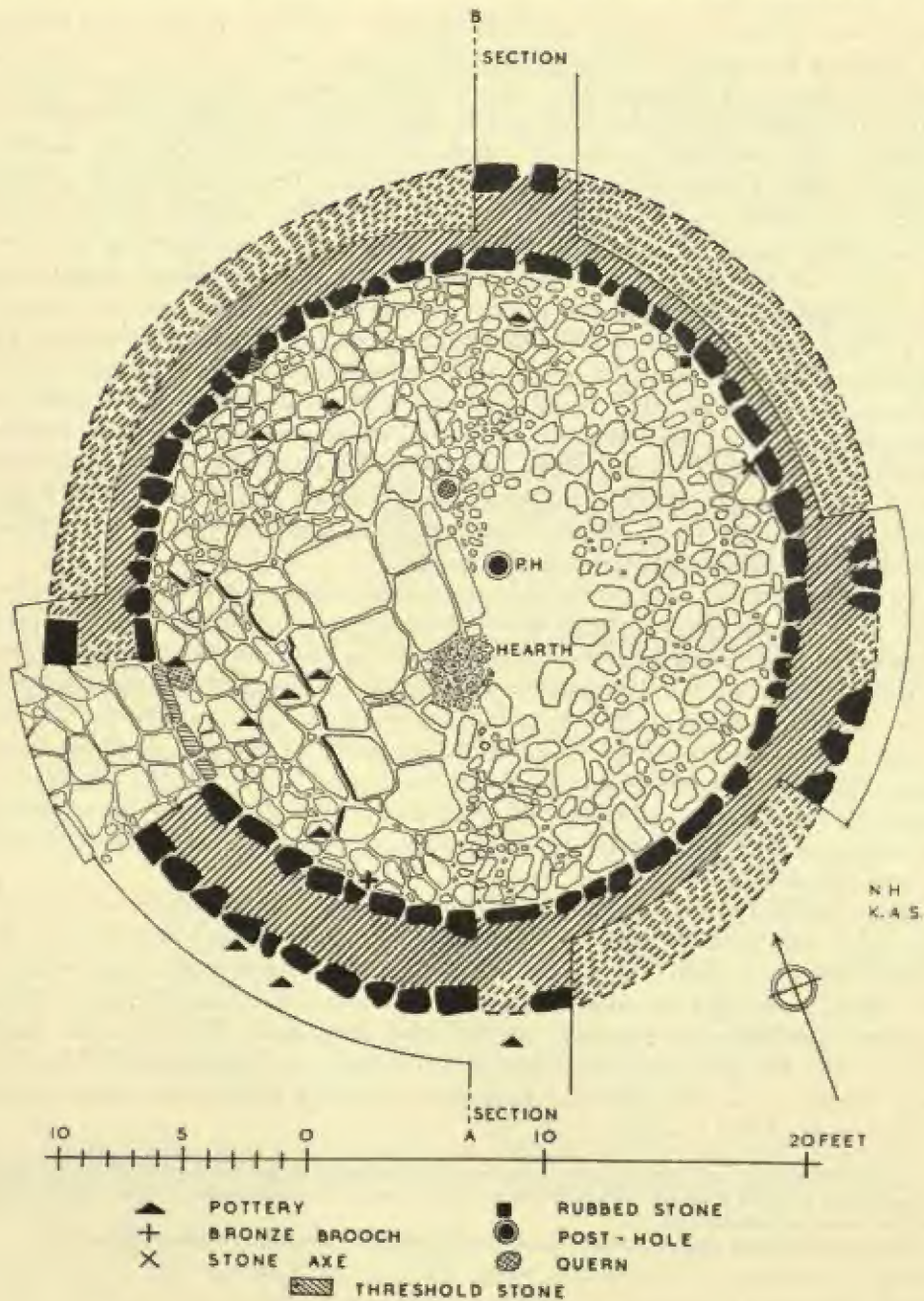


Fig. 3. Hut E. 1, East Homestead.

as the base of the inner jamb and not as a sill. No pivot-stone was found,¹ but against the jamb of the inner wall, on the south side, was a hole in the hut paving, 9 inches wide and 5 inches deep, with a stone bottom. If the door was pivoted at this point, and opened inwards in a clockwise direction, the wearing on the northern threshold-stone, and the absence of wear on the threshold-stones nearer the hinge, becomes understandable, but the evidence was not entirely conclusive. The interior of the hut is paved at the same level as the paved approach for a radius of 5 feet from the centre of the entrance. Elsewhere it is 7 inches higher, possibly to minimise the draught from the door.² Except for a patch near the centre, the paving is continuous, but is much better laid in the western half of the hut where there are several large flags measuring 3 feet in length by 2-3 feet in width (Pl. XVII, 1). Near the centre of the hut is a hearth, defined on three sides by flags, and floored with small stones which have been heavily burnt (Pl. XVII, 2). North of the hearth, and just off the true centre of the hut, is a post-hole, 1 foot in diameter and pointed to a depth of 16 inches below the boulder clay. It was packed with small stones and evidently held the main timber supporting the roof.

In addition to the querns already described, the upper stone of a beehive-quern was found buried in the floor beneath a paving-stone near the post-hole, while fragments of coarse hand-made pottery, a stone axe, a bone, a rubbed stone, and a bronze annular brooch were discovered at various points on the pavement and in cracks in the floor (fig. 3). While the hut paving had been patched up in a few places there were no signs of wholesale reconstruction, and the relics from the floor must therefore be regarded as belonging to a single occupational period. The hut was not burnt down, but seems to have gradually disintegrated, fallen stones being found both sides of the wall.

Excavation below pavement level in the main section showed that the flags, and the foundations of the hut wall, are not laid directly on the subsoil but on a strip of made soil, 4-16 inches deep, and suggesting, at first sight, an earlier occupation floor. On the other hand it may simply represent preliminary levelling of the hut site, as it fits the hut limits exactly and the pottery fragments it produced are indistinguishable from those found on the hut floor. A similar patch of made soil was observed to the south of the hut (fig. 6, A-B).

¹ The broken quern, re-used as a paving-stone immediately inside the hut entrance (Pl. XVI, 2), cannot have served as a pivot, since the socket shows no sign of wear and a door hung in this position would block the worn threshold-stone.

² The position of this step is shown in fig. 3 by a thickening of the edges of the paving-stones.

II. WEST SITE.

(i) *The Enclosure* (fig. 4).

The west homestead is situated on the edge of the same stream, 95 feet west of the east homestead and 30 feet below it. Except on the west side, where stone-robbing for the adjacent sheep-shelter has obliterated the remains, the line of the enclosure wall is well defined by a stony mound

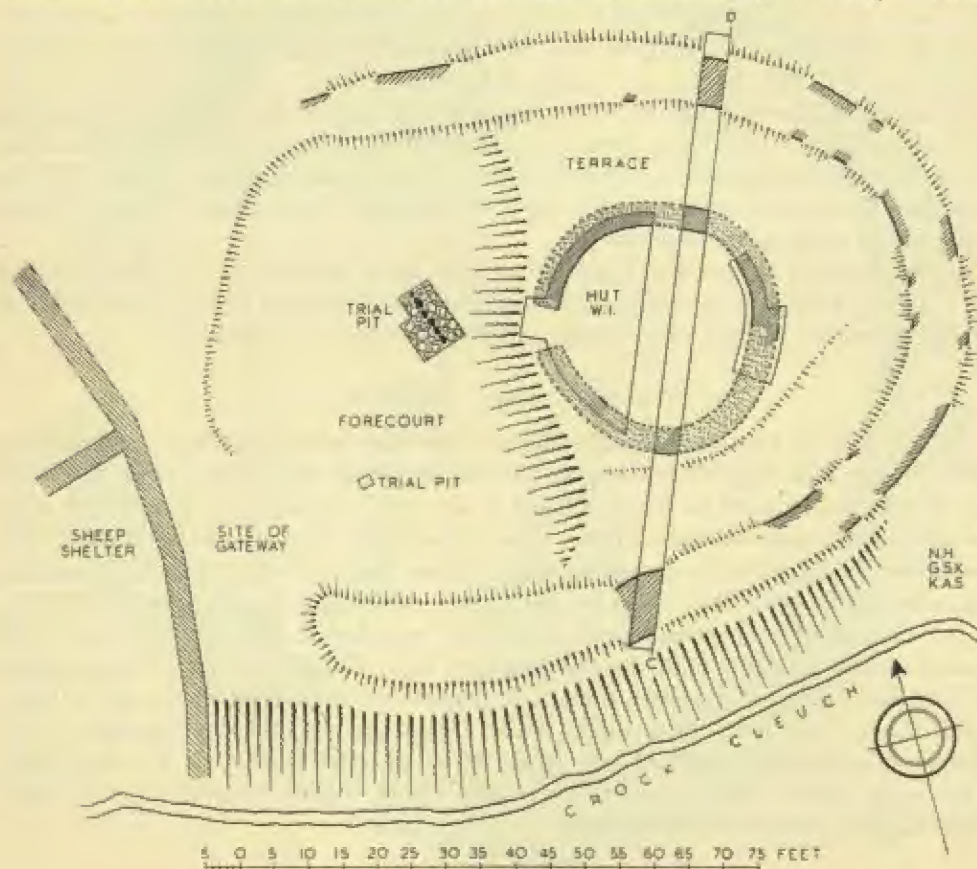


Fig. 4. West Homestead, Crock Cleuch.

in which facing stones are visible *in situ* at various points. The interior measures 70 feet from north to south by approximately 105 feet from east to west.

The enclosure wall varies in width from 7 feet on the north side to 8 feet 6 inches on the south, and is of the same construction as that on the east site. Orthostatic blocks are again employed in the outer face (one measuring 5 feet 10 inches long projects 2 feet above the present turf-line), while

smaller stones are used for the inner face; the core is formed of earth and rubble.

In the main section (fig. 6, C-D) scree gravel is absent, the enclosure wall on the north side standing directly on the boulder clay, while on the south it is laid on the river gravel, which has been scarped to provide a firm base for the outer face. The entrance is on the west side where there is a gap, 25 feet wide, in the enclosure wall: its exact position can only be fixed by excavation. As in the east homestead, the entrance leads into a hollowed forecourt, in this case occupying the entire western half of the interior and containing no visible remains of huts. A trial pit near the entrance produced boulder clay immediately below the turf, showing that the river gravel has been removed hereabouts in the course of excavating the court, but a larger pit further north revealed paving throughout. Lying on this pavement was a single row of boulders laid edge to edge whose purpose is at present obscure.

The eastern half of the interior consists of a terrace, at a vertical height of 7 feet 6 inches above the court, and separated from it by a well-defined scarp in which traces of a stone revetment can be observed.

(ii) *Hut W. 1* (figs. 5 and 6, C-D).

This hut is structurally similar to the corresponding hut on the east site though less regular in shape. It measures 30 feet from north to south by 28 feet from east to west, within a dry wall averaging 4 feet thick and, at the most, two courses high. The inner side of the north jamb of the entrance is preserved, together with three flags of the paved approach, but the south jamb has been rooted out. Although the interior of the hut was not completely excavated, the floor was again found to be less well paved in the eastern than in the western half, though the two levels noted in hut E. 1 are not present here. A fragment of Roman glass and a hone were found on the hut paving, while cracks in the floor produced a few scraps of coarse pottery of the same type as that found on the east site. The only other relic, a dressed stone, was found buried in the floor immediately beneath a flagstone.

THE FIELD-SYSTEM (fig. 1).

As already mentioned, an ancient field-system extends north-westwards from the west homestead. The remains comprise three lynchets (indicated on the plan by broken lines), all running parallel to the contours but at different elevations and of different lengths. The upper lynchet, which marks the highest limit of cultivation, is 500 feet long, the second 150 feet long, and the lowest only 70 feet long. The upper and centre lynchets are 280 feet apart and the centre and lower lynchets 120 feet apart. The

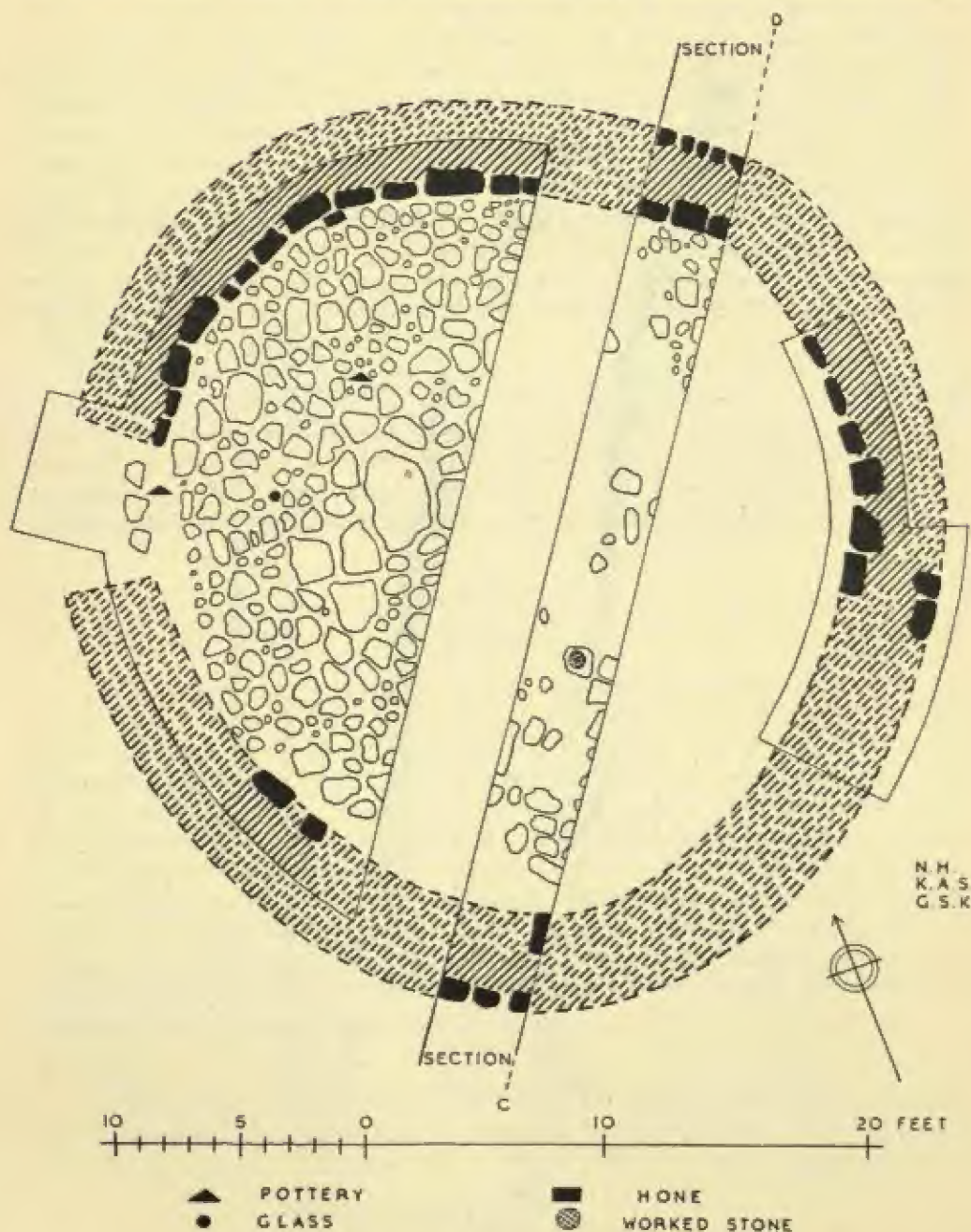


Fig. 5. Hut W. 1. West Homestead.

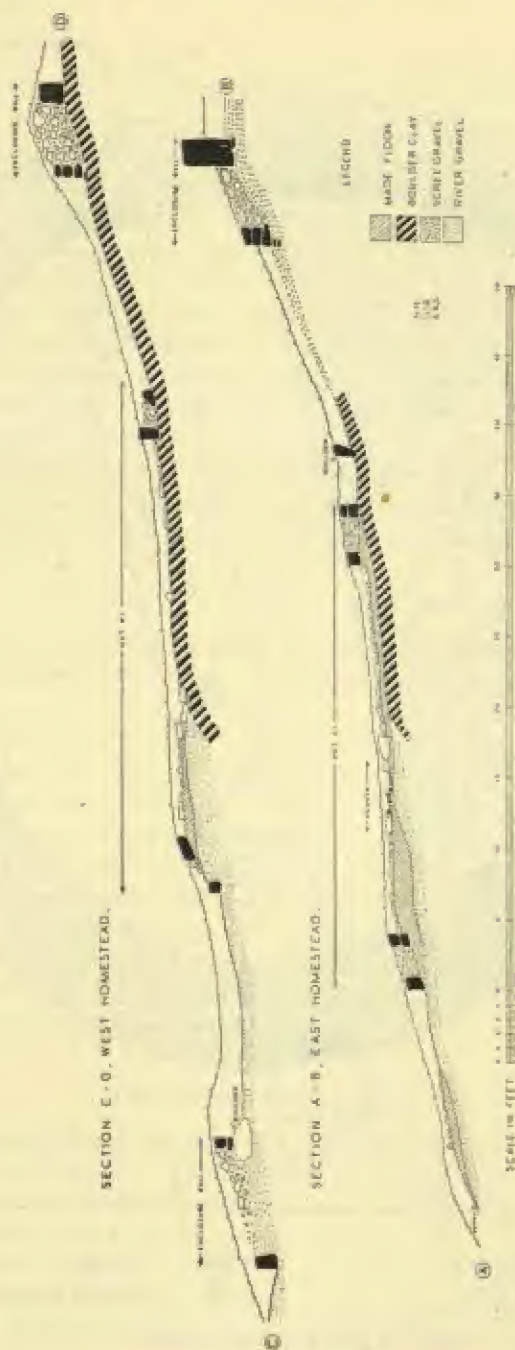


Fig. 6. Crook Clough Homesteads: Sections.

strips of ground between the lynchets have been divided into plots by transverse dry walls built of large boulders set a few feet apart, the space between being packed with small stones. This packing has now disintegrated leaving only the grounders in position. Three of these walls (indicated on the plan by solid lines) can still be traced. The westernmost links the centre and lower lynchets and continues for a further 20 feet downhill; the second starts 66 feet from the upper lynchet and runs to within 22 feet of the east end of the centre lynchet; while the third extends from the east end of the upper lynchet to within 10 feet of the homestead wall. A footpath which runs through this gap directly to the entrance of the east homestead presumably occupies the site of the original track between the two settlements.

That the fields and homesteads are contemporary can hardly be doubted from their relationship on the plan, the similar method of construction of their boundary walls, and the absence of alternative settlement sites in the immediate vicinity. In spite of its fragmentary pattern the field-system is clearly of the Celtic type,¹ which, except for the disputed instance at Torwoodlee,² has not previously been recognised in Scotland.

THE FINDS.

A. Pottery.

Ninety fragments of pottery were found including parts of five rims and a base (fig. 7, Nos. 1-6). All the fragments come from vessels of the same type—a bucket- or barrel-shaped pot, with a plain roll rim, made by hand of coarsely levigated clay. The external surface is unburnished, and both it and the body of the vessel contain large pieces of grit, while the inside has generally been smoothed by hand. Two of the fragments show evidence of building in strip-technique.³ Coarse ware of this kind is obviously a local native production, and microscopic examination of the grit content shows that weathered andesitic lava, such as is exposed on the face of Crock Law, predominates. This rock contains large feldspars, the decomposition of which would produce a proportion of Kaolin or China-clay suitable for coarse pottery-making.⁴

Hut E. 1.

1. (Fig. 7, No. 2.) From the hut floor. A plain roll rim from a straight-sided vessel at least 9 inches in diameter at the mouth. The texture is very hard and both surfaces are covered with fine grit: larger pieces of

¹ *Antiquity*, vol. i. pp. 8 and 275-8.

² Childe, *Scotland Before the Scots*, pp. 81-2.

³ Cf. *Proc. Soc. Ant. Scot.*, vol. lxxv. p. 210.

⁴ I am indebted for this analysis to Mr F. W. Anderson.

grit occur in the core. Core and interior are black while the exterior is ash-grey.

2. (Fig. 7, No. 3.) From the hut floor. A large fragment from the rim of a straight-sided pot, about 9 inches in diameter at the rim, made of coarse clay smoothed on the inside surface but otherwise gritty. Black throughout.

3. (Fig. 7, No. 6.) From the entrance. Part of the base and wall of a bellied pot. The body is fired to a buff colour on the surface and is rough and gritty, while the interior is black and smoothed.

4. (Fig. 7, No. 4.) From the made earth below the hut paving. Roll rim and side of a straight-sided vessel, roughly smoothed both inside and out, but with a heavily gritted core. The external surface is black and sooted, while the interior is a dull buff colour.

5. (Fig. 7, No. 5.) From the made earth below the hut paving. Roll rim from a vessel similar to No. 1. The exterior is heavily coated with soot, while the interior bears grass-stalk impressions.

6. (Fig. 7, No. 1.) From the main section south of the hut. A large fragment of the rim and side of a bellied pot over 12 inches in diameter. Small chips of stone are visible in the core and outer surface, while the inside is smoothed.

The manufacture, use, and distribution of this type of ware has recently been the subject of a special study by Dr Richmond,¹ who shows that it is "everywhere associated with the Iron Age hill-forts and homesteads of the Votadinian tribe" whose territory extended from the Tyne to the Forth. The ware, however, is not closely datable. A product of the overlap between the Bronze Age and Iron Age cultures, it is found in levels underlying Romano-British sites at Gunnar Peak and Gunnerton in Northumberland, and, in a Romano-British context, on several native sites in Northumberland, at Traprain Law, and in the hill-fort at Edgerston, Roxburghshire; while elements of the same ceramic tradition appear to be reflected in a Saxon pipkin from Heworth dated to the seventh century.²

B. Glass.

1. *Hut W. 1.*—Between the floor-stones. Amber-coloured fragment of Roman glass identified by Mr W. A. Thorpe as part of the handle-join of a jug, similar in form to that found at Turriff and fully described in *Proc. Soc. Ant. Scot.*, vol. lxviii. pp. 439-44. Mr Thorpe dates this type of jug in Britain to the late second or early third century.

¹ *Archæologia Eliana*, Ser. 4, vol. xx. pp. 121-33.

² In Dr Richmond's study the pottery from the homesteads at Crock Cleugh (therein referred to as Sourhope) is said to be carried on by associated relics towards the twelfth century (*loc. cit.*, p. 129). This conclusion was based on an early opinion that the bronze brooch found in hut E. 1 is twelfth century—an illusion which has since been dispelled.

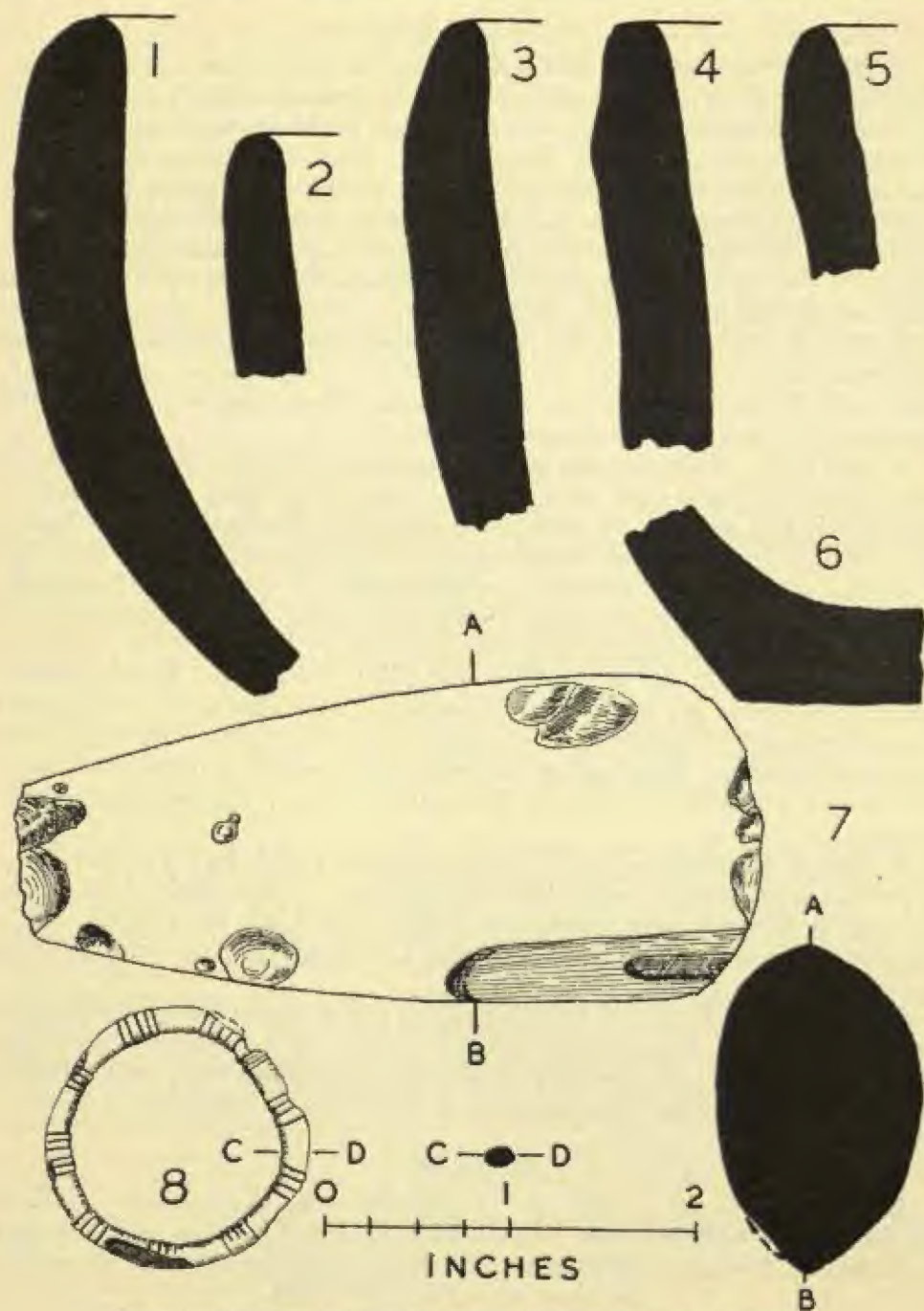


Fig. 7. Pottery, stone axe, and bronze annular brooch from Crock Cleuch.

C. Stone Implements.

1. (Fig. 7, No. 7.) *Hut E. 1.*—Between the floor-stones. Ground axe, 4 inches long by $1\frac{3}{4}$ inches broad at the widest part, and $1\frac{1}{16}$ inches thick. In section it is rather a thick oval, narrowing in thickness at each end and broader at the chopping-end than at the butt. The sides are slightly rounded but there is no flattening. The material from which it is made is greywacke, greenish inside and with a heavy light brown patina on the outside. It has been well worn at both ends and has been battered and chipped all round, possibly after it was discarded. It is very scratched, but shows no sign of rolling by water action.

2. *Hut W. 1.*—Between the floor-stones. Hone, $5\frac{1}{4}$ inches long and $1\frac{3}{4}$ inches wide.

3. *Hut E. 1.*—Between the floor-stones. Flat oval stone, 7 inches long and $3\frac{1}{4}$ inches wide; rubbed on one edge.

4. *Hut E. 1.*—Built into the inner face of the hut wall. Slab of andesitic lava which has been used as a grain-rubber. The stone is fractured on three sides, but appears to have been originally circular in shape and is thus distinct from the true saddle-quern. The surface is deeply worn by grinding, and the sides have been decorated with both vertical and horizontal grooves deeply cut with a sharp instrument. Similar grooves were observed on the face of a saddle-quern (*sic*) found at Gunnar Peak.¹

5. *Hut E. 1.*—Buried in the floor of the hut and covered by a flagstone. Upper stone of a beehive-quern of andesitic lava similar to a specimen from Newstead.² There are two socket-holes in the side, 120° apart, for horizontal handles. The base of the stone has broken off below one socket and there is a similar fracture on the opposite side. The grinding surface is worn.

6. *Hut E. 1.*—Segment of the lower stone of a revolving quern, re-used as paving immediately inside the hut entrance. The edges of the stone are roughly trimmed and there is a central socket for the spindle, but it has been fractured before use as neither the socket nor the surface show any sign of wear.

7. *Hut W. 1.*—Buried in the floor of the hut and covered by a flagstone. Block of andesitic lava dressed into the shape of a truncated cone and measuring $9\frac{1}{2}$ inches in diameter at the base, $6\frac{1}{2}$ inches high, and 7 inches in diameter at the top. The purpose of this stone is unknown.

D. Metal.

1. (Fig. 7, No. 8.) *Hut E. 1.*—Between the floor-stones. Bronze annular brooch with iron pin. The brooch is oval in section and measures $1\frac{1}{8}$ inches in diameter internally. The back is plain, while the front and

¹ *Archæologia Æliana*, Ser. 2, vol. x. p. 24.

² *Antiquity*, vol. xi. p. 147, No. 30.

sides are decorated with ten groups of from three to five transverse ring-mouldings. Two of these groups are set close together on either side of a worn groove, which extends round the back of the brooch, and in which the pin was pivoted, while the remainder are evenly spaced around the circumference. The iron pin was reduced to a few corroded fragments and defied preservation.

This type of brooch, in which the ring is always bronze though the pin may be of bronze or iron, occurs fairly frequently in Anglo-Saxon cemeteries in Yorkshire and the south of England,¹ but has not been recorded previously from Scotland. Its absence at Traprain Law is noteworthy. While, however, the majority of these brooches have been found in specifically Anglo-Saxon contexts, Mr Leeds informs us that the type is essentially of British and not Teutonic origin, so that a pre-Saxon date is not impossible.

GENERAL SUMMARY.

The discovery of the same type of pottery on each of the principal hut-floors confirms the structural indications that the homesteads possess a common cultural parentage. While they were not necessarily built simultaneously, it may be assumed that the occupations overlapped, for had one homestead been erected first, and subsequently abandoned, new settlers would presumably have reoccupied it rather than undertake the laborious task of constructing an almost exact replica in the immediate vicinity. As each site would only house a single family, the duplication can be attributed either to the requirements of two unrelated families or, more probably, to the expansion of an original household due, perhaps, to the marriage of a son.

Homesteads of this type form a distinct class, and their comparative uniformity in design and execution enables them to be easily isolated from other patterns of native settlements occurring in the same area. Their distribution is well defined. Five more examples have been identified by the Royal Commission's officers in the upper reaches of the Bowmont and Kale Waters, but, although the survey of the county is incomplete, none has, as yet, been found in Roxburghshire outside these areas. The type occurs fairly frequently in the Lammermuirs,² while Mr A. H. A. Hogg's researches have shown that it is the commonest form of primitive settlement encountered on the southern slopes of Cheviot.³ The close affinity on plan between the typical Northumbrian specimen, Hartside Hill, and the Crock Cleuch sites is particularly noteworthy.⁴ Further afield a

¹ E.g. Uncleby, Yorks (*Proc. Soc. Ant. London*, vol. xxiv., Plate facing p. 152, No. 3), and Alfriston, Sussex (*Sussex Arch. Collections*, vol. lvi., Plate iv., No. 2). Other examples from Londesborough and Sancton, Yorks, and Chatham, Kent, are in the Ashmolean Museum.

² R.C.H.M. *Berwickshire* (revised edition).

³ *Antiquity*, vol. xix. p. 83.

⁴ *Ibid.*, vol. xvii. p. 139.

possible example has been cited from Peeblesshire,¹ but the small enclosures in Midlothian and Dumfriesshire² are not strictly comparable (though they have some features in common with our homesteads) and are thought to be largely mediæval. No unequivocal parallels have been found either in Westmorland³ or in the West Yorkshire dales.⁴

Owing to the lack of excavation on sites of this class, evidence for their date principally depends on the relics from Crock Cleuch, which, though gratifying in number, are more remarkable for their wide cultural range: at one end of the scale is the stone axe and at the other the annular brooch of a type current in the early Saxon period. For precise dating, however, the axe and the quernstones are of little account. There is ample evidence for the continued employment of stone axes into the Iron Age in Scotland,⁵ and there is no reason why they should not have persisted in use on primitive sites into the Roman period. The querns, on the other hand, were all incorporated in the fabric of the hut, and while they may well be contemporary with the settlement, and simply represent first-aid repairs with discarded material (all three had been rendered useless by fractures), the possibility that they belong to an earlier occupation whose structural remains are still to seek cannot be overlooked. The coarse pottery is a more reliable source of evidence since it was undoubtedly fashioned on the site, and, thanks to Dr Richmond's study of the comparative material, it is clear that, as their distribution suggests, the homesteads are linked with the Votadini, the tribe whose territory embraced Northumberland and the Merse in Roman times. Unfortunately this ware is not closely datable since it seems to have continued in use from pre-Roman to pagan Saxon times: hence the importance of the fragment of Roman glass, which points to occupation of the sites in the late second or early third century. How long before and after this the sites were occupied is unknown. Assuming that the inhabitants would be lightly shod, if not barefooted, the amount of wear on the threshold stone of hut E. 1 indicates an occupation of considerable duration, to be measured in centuries rather than in years. And while none of the relics necessarily implies a pre-Roman occupation, the bronze annular brooch suggests that the sites continued to be inhabited until late Roman or early Saxon times. This conclusion has, indeed, been already anticipated by Dr Richmond's demonstration that the Crock Cleuch type of homestead formed the model for St Cuthbert's hermitage on Farne Island and must therefore have been current on the Lammermuirs and Cheviot in the saint's lifetime.⁶

¹ *Proc. Soc. Ant. Scot.*, vol. lxxv, p. 108.

² R.C.H.M. *Midlothian*; R.C.H.M. *Dumfriesshire*.

³ R.C.H.M. *Westmorland*.

⁴ *Forks. Arch. Journ.*, vol. xxxiv, pp. 115-50.

⁵ Childe, *Prehistory of Scotland*, p. 220.

⁶ *Antiquity*, vol. xv, pp. 88-9.

Owing, no doubt, to the destructive nature of the soil acids, no bones or iron implements were recovered from Crock Cleuch, and further research is needed to throw light on the economic organisation of these small communities. Similarly, until more excavation has been done, the relationship between these simple oval farmsteads and other types of Romano-British settlements found in the Votadinian area—notably the rectilinear sites such as Gunnar Peak¹ and Carry House,² and the more complex villages such as Greaves Ash³—remains conjectural. It has been suggested that, from their resemblance with the *viereckschanzen* of the Upper Rhine, the rectilinear sites in Northumberland may represent settlement of the district by Rhætian immigrants in the second century. But both at Gunnar Peak and Carry House (and also at Greaves Ash and the small ring-fort of Chesters, Northumberland⁴) the huts are of the distinctive type found at Crock Cleuch, with raised thresholds and central post-holes, so that a common cultural tradition is implied in spite of the different appearance of the various sites on plan.

ACKNOWLEDGMENTS.

It remains to thank the owner of the land, Mr P. J. Bruce of Mervinslaw, Jedburgh, for permission to excavate, and Mr J. C. Scott for invaluable assistance in the preliminary stages. Mr Bruce has generously presented the relics to the National Museum. The work would have been impossible but for the voluntary services of Miss N. Hey (Mrs Crombie), who also helped with the surveying and prepared the report on the stone axe, and Messrs C. T. Hatten, A. B. Hume, J. C. D. Lawrance, G. D. Pool, J. G. Scott, and J. H. Waddell.

The writers are further indebted to the Royal Commission on Ancient and Historical Monuments for permission to include in this report certain unpublished material collected by its officers; to Messrs F. W. Anderson and R. J. A. Eckford for advice on geological problems; to Dr I. A. Richmond and Messrs R. J. C. Atkinson, E. T. Leeds, R. B. K. Stevenson, and W. A. Thorpe for assistance in identifying the various relics; and to Mr C. S. T. Calder for help in the preparation of the plans.

¹ *Archæologia Æliana*, Ser. 2, vol. x. pp. 12-37.

² *Archæologia*, vol. xlv. pp. 355-74.

³ *Proceedings of the Berwickshire Naturalists' Club*, 1856-62, pp. 294-316.

⁴ *Ibid.*, pp. 305-6.

XI.

FARMS AND FORTIFICATIONS IN THE KING'S PARK, EDINBURGH. By ROBERT B. K. STEVENSON, M.A., F.S.A.Scot.

Read April 14, 1947.

"The situation he chose for his new settlement was at a place called St Leonard's Crags, lying betwixt Edinburgh and the mountain called Arthur's Seat, and adjoining to the extensive sheep pasture still named the King's Park, from its being formerly dedicated to the preservation of the royal game. Here he rented a small lonely house. An extensive pasture ground adjoining, which Deans rented from the keeper of the King's Park, enabled him to feed his milk cows; and the unceasing industry and activity of Jeanie, his eldest daughter, were exerted in making the most of their produce."

The Heart of Midlothian, chap. ix (1818).

Although most people who in a few minutes from the city streets find recreation among the bare slopes and crags of the King's Park are familiar with "Jeanie Deans' cottage," the grassy outlines of still lonelier dwellings are usually passed unnoticed. The following pages take the form of an imaginary tour, starting from the most recent traces of familiar type, past fields and buildings about whose age and original appearance scarcely anything is known, to end at a simple settlement of remote date. On the way attention will be drawn to traces of some less peaceful periods. It is hoped that the reader will then make the tour on the ground.

COTTAGES AND RIGS.

On the third highest of the escarpments known as the Dasses, which overlook Hunter's Bog, there is a rectangular enclosure whose stony outline, originally 3 feet thick, is about 70 feet wide and 80 feet long (Pl. XVIII, 1). The long side runs down the gentle slope, and at the upper end a cross-bank cuts off a space 12 feet from crest to crest, which appears to have been levelled artificially. This suggests a long cottage, and byre, at the head of its yard; although indeed the secluded position and northerly aspect are somewhat uninviting.

Not far away to the south-west, at the foot of the crag and in fact having its lower edge only 3 feet above the level of the top of the dam which closed the mouth of the bog, is a larger (120 feet by 140 feet) enclosure of similar construction. There is no suggestion here of a dwelling.

The foundations of another rectangular building can be seen 50 yards towards Duddingston from the south end of Dunsapie Loch on the slope of the crag of that name, at about 375 feet above sea-level (Pl. XVIII, 2).

They have an over-all width of 20 feet, and, sloping down from one end, a length of certainly 55 feet, to which 40 feet should probably be added. This building looks across the Queen's Drive (constructed in 1846) to the rigs that run up the main hill-slopes.

The outline of a less remote structure can be clearly seen just below the north-west end of the line of low crags which include the Echoing Rock (Pl. XVIII, 3). The external dimensions are roughly 15 feet by 30 feet. It had looked across the sweeping plough rigs, some bowed, which can be traced past St Leonard's Lodge at the Park gate. The "headland" that runs parallel to the foot of the crags along the ends of the curving rigs swings out as it approaches the building. Moreover, just short of the southern corner, the conformation of the ground suggests that the plough-team turned there sharply from one rig back on to the next. In short, rig-ploughing went on while the building was in existence.

Above the south-east end of the same line of crags there was another rectangular cottage, close to the steps up to the Queen's Drive (Pl. XVIII, 4). The green mounds suggest that it had been nearly 20 feet by 60 feet. It rested on an artificially levelled platform, perhaps cut into a low knoll, 10 feet in front of which the hill slopes down steeply. The south-east half of the building itself slopes down from the other half. We may compare the plan with the excavated remains of John Brown's cottage at Priesthill, Muirkirk,¹ a very slightly larger building—20 feet by 65 feet—whose sloping half is shown by a drain to have undoubtedly been the byre, and which was certainly inhabited in the seventeenth and eighteenth centuries.

The plough-rigs of the series which clearly continues as far down the valley as "Jeanie Deans' cottage," fade at a boggy piece of ground behind the cottage just described. The ends curve northwards, those of the north-east ones to the "headland," which also seems to mark the continuation of the old grassy road that comes up the northern edge of the valley. This road zigzags up to the Hawse gap, is cut through by the Queen's Drive, and finally gets lost in the banking of the Drive. There are the remains of a wall at right angles to the rigs nearer the cottage, past whose north-west end it runs downhill. Though no other sides of an enclosure can be seen, it might have been built to separate the ground behind the cottage from the rig-ploughed fields. For there are only faint suggestions of ploughing, and the bumps in the ground over which the wall runs do not fit in well with the existing rigs.

TERRACES AND SCOOPED ENCLOSURES.

Another stretch of dyke downhill is plainly contemporary with the rigs bounded by its zigzag course. The upper end of this zigzag boundary, however, crosses the north-west end of a horizontal terrace which has been

¹ *Proc. Soc. Ant. Scot.*, 1926-27, p. 287.

eaten into by the "vertical" rigs (Pl. XVIII, 4). Two more of these terraces can be recognised, the uppermost continuing along the front of the cottage. Their breadth varies from 10 to 25 feet. These three may well be the remains of a series largely destroyed by rig-ploughing. The rigs themselves might be assumed from our opening quotation to have fallen out of use before Sir Walter Scott's day; they are certainly earlier than the now green road which cuts across them 30 or 40 yards above the present lower road, which it joins just before Samson's Ribs. This old road was in use in the early nineteenth century. In general rig-ploughing ceased as a result of the Agricultural Revolution in the later eighteenth century.

This leads us to a well-known problem. Despite Mr O. G. S. Crawford's pronouncement,¹ the weight of the evidence indicates that the famous terraces overlooking Dunsapie Loch have also been encroached upon by, and are earlier than, the rigs which run some way uphill from the Queen's Drive. The following signs of the succession may be noted. The upper ends of the rigs do not form a line parallel to the terraces. In the north-east corner of the group the terraces come right down to the Drive² on ground no steeper than that up which some rigs run close by. Moreover, a stretch of ground just uphill from the ends of the rigs is less steep than that up which they run. Stones suggesting terrace fronts remain in the rigs,³ more especially towards the south, where the slight rise indicating a terrace may be seen crossed by rigs (fig. 1). Unfortunately where the centre rigs impinge on the undoubted terraces a modern military trench (World War I) has disturbed the ground. It should be noted that at the northern end there are some thirty terraces above the Drive, not merely ten as in *Ancient Mon. Com. Report*, Midlothian, No. 11.

In the south-east corner of this field system, above the bend of the Queen's Drive, the numerous stones and boulders mark not only the lines of cultivation but the outlines of what may be called farm buildings⁴ (Pl. XVIII, 5, and fig. 1). The extent to which the ground has been artificially levelled to prepare the sites of the buildings is of greatest assistance in disentangling the maze. The main structures, round which the rest cluster, are of the type described in *Proc. Soc. Ant. Scot.*, 1940-41, under the name of "scooped enclosures with several floors." If we walk up the eastward-facing slope for a hundred yards from the Drive, keeping near to the steep slope to the Drive on the south-east, the terraced front of the more isolated of the two enclosures is easy to see. The line of a stone revetment runs along the foot and continues past the rounded corners up the sides at right angles to

¹ *Antiquity*, 1939, p. 290.

² Eckford in *Proc. Soc. Ant. Scot.*, 1927-28, p. 115.

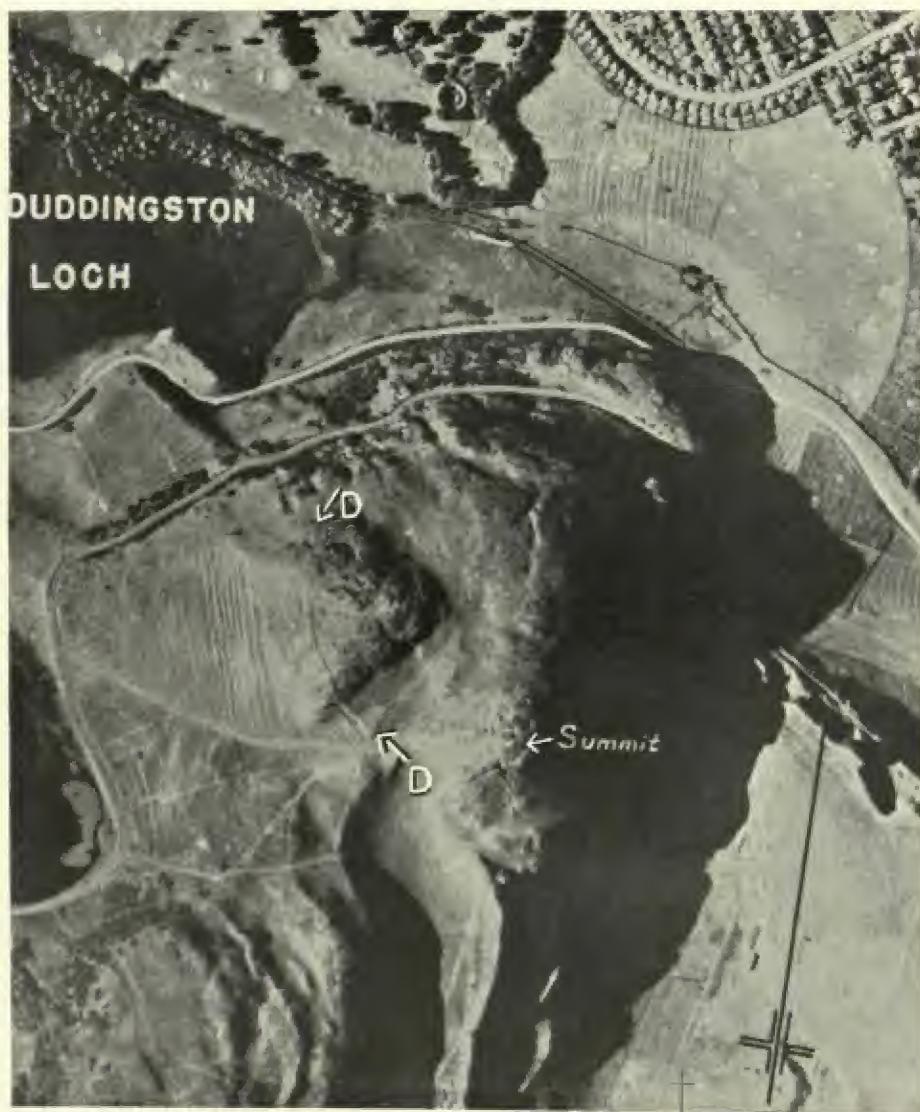
³ Graham in *Proc. Soc. Ant. Scot.*, 1938-39, p. 298.

⁴ The Jacobite encampment on the eve of Prestonpans is marked here and to the north on some maps. On a contemporary Hanoverian sketch exhibited at the Jacobite Exhibition in Edinburgh in 1946 the camp was shown nearer Duddingston.



Map of King's Park, Edinburgh, showing archaeological features.

(Based, with permission, on John Bartholomew & Co.'s Map of Edinburgh.)



Air photograph of Arthur's Seat, showing defensive dyke (Site 9, D-D),
terraces, and enclosures (Sites 5 and 7).

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the front. Along the top of the terrace, which is 4 feet high, are traces of an inner enclosing wall. At the sides the distance between the inner and outer faces appears to be about 5 feet. The greatest over-all width of the enclosure is 85 feet and the distance from front to back 65 feet. The curvilinear back of the enclosure is marked by a few blocks, some at the foot and others at the top of the short slope, only $2\frac{1}{2}$ feet high, formed by the scooping process. The entrance may have been at the south-west corner. In the north-west corner there is a curvilinear level area, or "floor," rather over 25 feet in diameter, with a slight drop to a smaller floor in front. The south-west is more oblong in shape and has a fairly straight front. The fourth quarter of the enclosure, in its final form at least, cannot have been covered by a single hut—as might be suggested in the case of the other floors—since the footings of a wall stretch obliquely across it. Against the north-west of the enclosure there impinges an irregularly shaped annexe about 40 feet across.

The second scooped enclosure is less clearly marked by remains of walling, but has been more deeply dug into the hillside and massively terraced in front. It lies 35 yards further downhill. A number of large boulders, probably exposed while the work was going on, with consequent influence on the plan, take one's eye off the outline of the whole. The greatest over-all dimensions are 85 feet from front to back and 80 feet from side to side. The shape approximates to a circle with rather flattened sides. The front pair of quasi-circular floors are some 25 feet in diameter. That to the north-west is crossed by what appears to be the wall of a rectangular building (? 14 feet by 25 feet) whose general appearance is intrusive. In front of these floors the terrace drops 4 feet, while behind there is a rise of 3 feet to the upper pair. The north-west floor is rather narrow and oblique to the axis of the enclosure, while the other is sub-divided by a slight change in ground-level. The slope behind rises at most 8 feet to the outer line of the enclosure wall, which continues round the upper ends as a bank, most marked on the south-west.

The outline of this main enclosure is obscured by structures clustering against it. Thus on the north side there is a sub-rectangular enclosure (40 feet by 45 feet) less pronouncedly scooped and terraced and having a wall of rather small stones. In the south-east corner of this there is a circular floor 20 feet across. A line of small boulders and stones forms a terrace 20 feet downhill from here. It is roughly in a line with the front of the main enclosure but appears isolated. Against the northern part of the main terrace front there is also a terraced floor. Another floor, deeply scooped, adjoins the south-west corner of the enclosure; and there was yet another downhill from it near the south-east corner.

A segment of a third large deeply scooped enclosure appears further downhill once more, at the edge of the Queen's Drive, which has cut away the remainder of it. Flanking the main series are two irregular-shaped structures over 30 feet across, 60 feet and 80 feet respectively north-east

and north-west of the central enclosure. Lastly the site of a small building very roughly circular, about 20 feet in diameter, lies 40 feet further uphill than the upper enclosure.

Some discussion is necessary of the relation of the parts of this complex group of buildings to one another and, more important, to the cultivation rigs and terraces. First of all we may note a difference in surface appearance between the upper and the middle scooped enclosures, apart from the extent of the scooping. The former is less obscured by accretions, and has more medium-sized blocks but fewer smaller stones of its structure visible. This suggests that it was constructed first, but neglected and demolished in favour of the growing cluster downhill. Contemporary with the use of the upper enclosure, from whose south-east corner it begins, would appear to be the wall along the steep drop of the hill to the south-east. It runs past the central enclosure, and may have turned into its south-east corner. Above the group of buildings the edge of this drop is well marked—but stoneless. Probably it was formed by the plough turning at the ends of the terraces; if so, it proves that these existed in some form before the enclosures. On the other hand, the front of one of the cultivation terraces is continued by a terrace that swings downhill as if to round the north-east corner of the upper enclosure—after whose construction horizontal ploughing may therefore still have been carried on.

The lowest clearly visible horizontal terrace front ends at the north-west corner of the middle enclosure. It forms an angle with the back wall. This most probably means that the enclosure was cut back into a pre-existing terrace, but not certainly, for terrace fronts are not in detail straight and there is a line higher up in a somewhat intermediate direction. Further, the sharpness of the surface indications of this lowest terrace has been blurred, due it would appear to vertical ploughing which came up to and crossed the terrace front, swinging round the enclosure's annexe, and so (horizontally) along the back of the enclosure.

Finally it may be noted that of the small rather isolated structures, the central one lies athwart a terrace, with its back conforming to the line of the front of the terrace above, and that the uppermost structure of all, the small circle, also lies on a terrace.

In short the farm buildings seem to have grown and undergone changes which affected the most rock-strewn corner of an area already under horizontal cultivation. And this cultivation may have been continued by the inhabitants.

Some further evidence is provided by a scooped enclosure marked by grassy dimples, and two short stretches of stony bank, on the far (east) side of Dunsapie Crag (Pl. XVIII, 6, and fig. 2). Two small structures adjacent on the south are suggested on the plan on either side of a relatively modern turf dyke, and there are others a short way further uphill. Yet another may

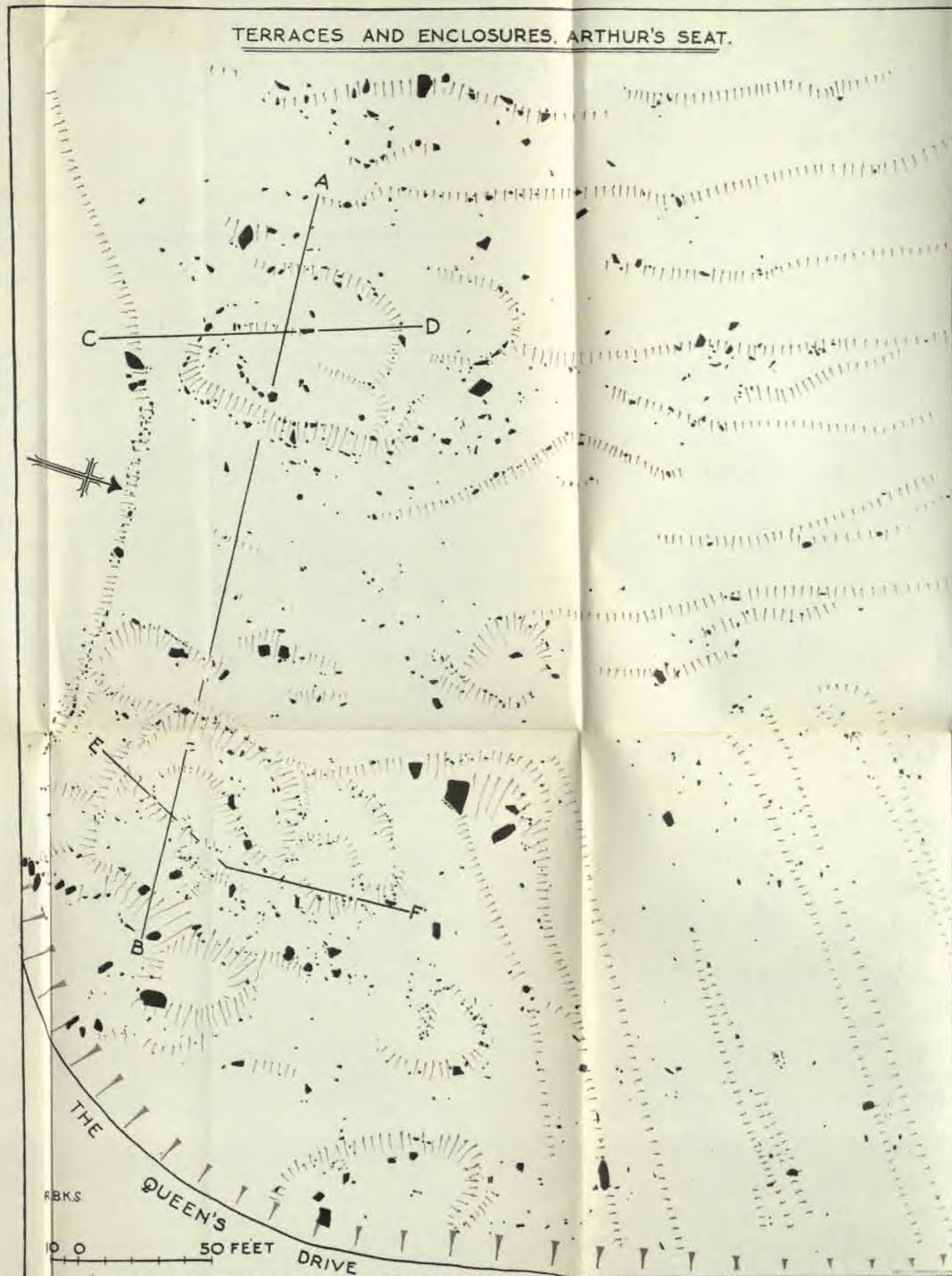
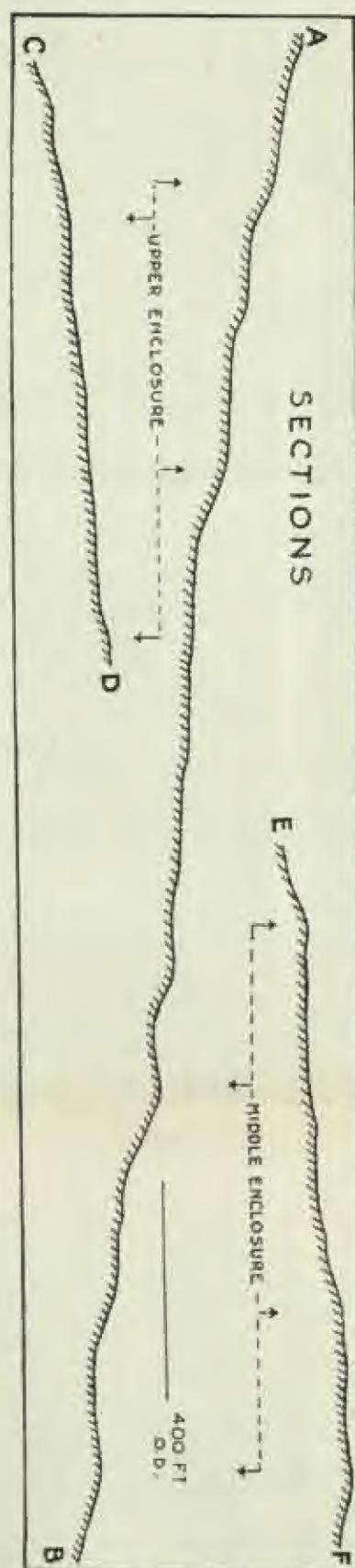


Fig. 1. Terraces and enclosures, Arthur's Seat, Edinburgh (Site 5): with relative Sections.



nestle against the north-west corner, and from it stretches what is conceivably a terrace, with a much fainter one a little downhill—not planned. The enclosure itself measures 95 feet by 80 feet, with a maximum total

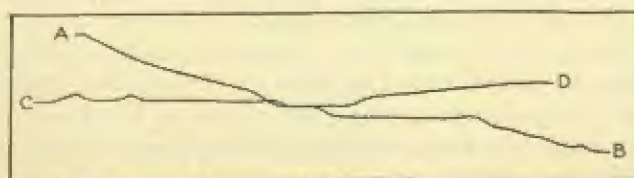
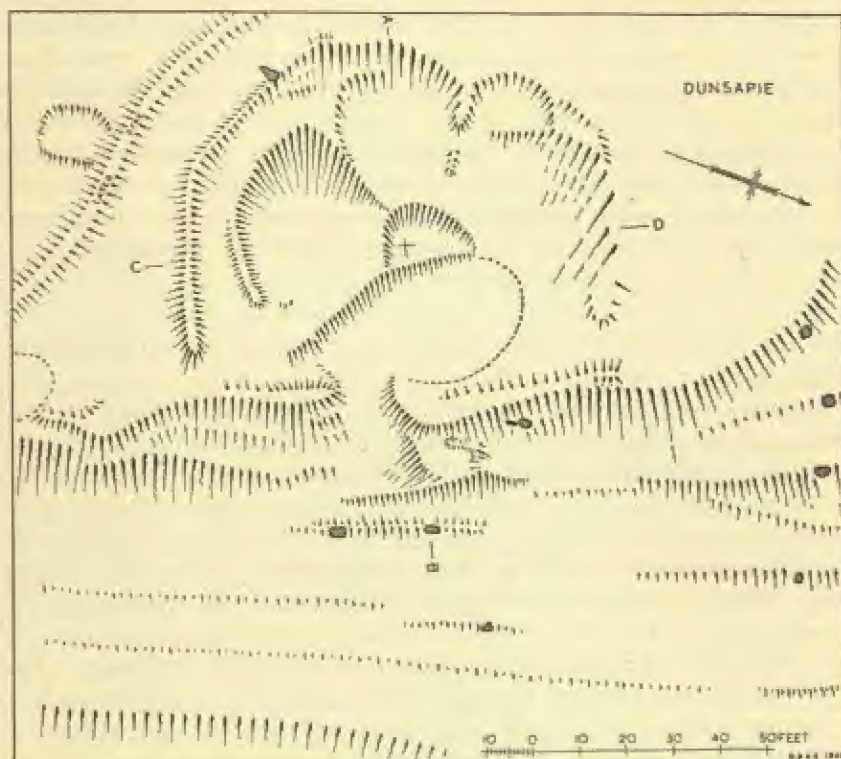


Fig. 2. Scooped enclosure and terraces, Dunsapie (Site 6).

drop internally of 18 feet. It had at least five internal "floors" of varying size, in some of which the grass is now a brighter green. It lies 40 yards uphill from the highest point on the Park's boundary wall. This is the gentlest sloping side of the crag, forming a broad ridge which slopes towards the east and which is crossed by a number of horizontal terraces, some for the most part faint and rig-like. (This series continues below, outside the

Park boundary.)¹ The clearest of them is anomalous in that it swings uphill at the sides of the ridge, being transformed into a sort of boundary dyke. It is in fact not really a terrace, and is probably much older than the terrace system (see p. 168 below). Its front, however, has been in part steepened by the formation of a negative lynchet which nibbled back into it. The front of the enclosure coincides with this "terrace," and the lower enclosing bank runs along the top of it. The entrance has been cut through the "terrace," and the lynchet below is blocked to the north of the entrance by the resulting heap of spoil. The approach hollow stretches southwards. Apparently, then, the enclosure was made after the terraces were first formed. However, some indistinct marks where a positive lynchet is obliterated north of the spoil heap suggest that the ploughing may have continued and swung obliquely past the entrance obstruction. Gaps at the lower ends of the enclosure's surrounding bank, and still more the virtual obliteration of its northern side, suggest the possibility of ploughing after its abandonment.

There are no vertical rigs just here, but on the gentler slope to the north the terraces merge into a series of vertical rigs; this may be a mere coincidence, for there is a slight indication that the upper true terraces swung along the side of the hill where the vertical rigs seem to abut on them obliquely. In general the contrast must be formulated as being less between rigs and terraces than between working the plough-team along and across the contours. Ideas on drainage must have differed in the two cases. It may not be unreasonable to connect the custom of scooping and terracing habitation sites with the deliberate formation of cultivation terraces. However that may be, there is nothing to suggest that both the curvilinear buildings and the terraces are not of earlier date than the vertical rig cultivation, and we have already indicated that elsewhere in the Park it is rectangular cottages that may be connected with the later mode of ploughing. The earlier remains may be vaguely dubbed *mediaeval*.²

At two other places in the Park there are remains of single scooped enclosures. The first is 200 yards south-west of the Windy Gowl (Pl. XVIII, 7). A grassy circle has been formed by terracing the front to a height of 6 feet, while the back has been cut over 10 feet deep into the hillside. The enclosing wall, 95 feet in diameter, is recognisable at the sides, where one of the stones sticks up in the middle of a later road crossing the middle of the enclosure. The road may be the chief reason why no floors are distinguishable. The scarp of the modern road has obscured the back. Various adjacent bumps defy interpretation. The situation, low down at the edge of Duddingston Loch, is so far unparalleled for this type of structure; but it may not be irrelevant to note that the Duddingston terraces and those

¹ Graham, *op. cit.*

² *Proc. Soc. Ant. Scot.*, 1940-41, pp. 106-108.

in the Windy Gowl, along with those at Haggis Knowe on the other side of the Park, are the lowest on record.¹

The other enclosure is even less clearly recognisable, being located beside the remains of debris tips worked in connection with the quarries in the Salisbury Crags above it.² It lies 130 yards west of the Hawse gap and just above the grassy road mentioned on p. 159 (Pl. XVIII, 8). The banked-up front is retained by good-sized blocks. A block that may have fallen forward bears a bench-mark. About 120 feet across and 55 feet from front to back, the oval enclosure contains what appear to be traces of several "floors." The back has been obscured by a quarrier's track running along the top of the scooping. There are some indications of subsidiary structures outside.

DEFENSIVE DYKE.

Let us return to Dunsapie and follow the terraces which continue up the most accessible part of Arthur's Seat to over 600 feet above sea-level. Just above the last terrace a large rectangular enclosure spans the mouth of the small valley that runs below the main peak (Pl. XVIII, 9, and fig. 3, C). The upper side, nearly 50 yards long, of this enclosure forms the lower side of a much larger roughly rectangular enclosure, which stretches up the valley for over 100 yards, enclosing an area which, to judge from the cut-away appearance of the north-west edge and other indications, has at one time mostly been ploughed parallel to the long edges (*i.e.* vertically). There may possibly have been a small circular structure 25 yards down from the southern corner, while in the eastern corner there are clearer remains of a curvilinear structure.³ The walls of these enclosures are about 3 feet thick and similar to those of the cottage site on the Dasses. The common wall runs, however, along the top of a massive bank. Some large revetting stones of the bank, at one point in a double row, can be seen 8 feet to 15 feet out from the line of the wall, which is obviously secondary. It may be added that the curvilinear structure just mentioned appears to have been built partly on the bank and prior to the wall. The lowest enclosure wall, 40 feet to 45 feet away, also runs along the top of a bank, although one of slighter construction; some possible revetting blocks are 4 feet out from the wall face. Both banks continue south-east beyond the enclosures, and immediately pile up against the line of low crags bounding the valley. For what follows see fig. 3, B. On the top of the crags the line of the upper bank is continued south-east

¹ Graham, *op. cit.*

² For these, and also the mid-sixteenth-century enclosure of the Park, see W. Forbes Gray in *Book of The Old Edinburgh Club*, vol. xviii. pp. 184 and 195.

³ None of the visible remains are likely to result from the encampment of the mutinous Seaforth's, who are shown on old maps as having camped hereabouts in 1778. Traces of a small rectangular building within the smaller enclosure must be quite modern, as a recent Home Guard trench exposed concrete fragments.

across a rocky knoll by lines of stones; that the features above and below the crags are one work can best be seen from near the top of the Lion's Head. From about 40 yards south-east of the crag the line is continued along the north-east face of the Lion's Haunch by what at first sight appears to be a grassy terraced road, some of its material coming obviously from adjacent surface quarrying. As a road it is impracticable and leads nowhere; moreover, from its line it is seen to be a further extension of the bank we started by considering. The next hypothesis—that we are dealing with a boundary dyke, probably separating the cultivated land of the terraces from the rough pasture above—must in turn be abandoned because of two difficulties. Firstly, the lower bank is also continued by a line of walling whose scanty remains are recognisable along the steep hillside some 20 feet in front of the main line of the grassy terrace. Secondly, there is the character of both ends of these parallel dykes. Before dealing with these points in turn it may be interjected that an air photograph (Pl. XIX, D-D), taken since this discussion was written, demonstrates clearly the unity of the whole upper line and parts of the lower one, besides bearing out the conclusions reached from the general appearance of the work.

A fairly close examination shows that from the cliff edge beside the lower bank scattered blocks, some representing footing still *in situ*, run southwards for 35 yards along the side of the rocky knoll, approaching steadily closer to the upper dyke as the slope becomes steeper. Then for about 120 yards, and more convincingly in the first 45 yards than elsewhere, the traces of walling, continuing equidistant from the upper line, are chiefly confined to points where the purchase afforded by natural projections has prevented the stones slipping with the hillwash down the steep slopes. Thereafter there is a stretch of 35 yards during which the lower line appears as an unmistakable green terrace. (It is arguable that this terrace sprouts at a low angle from the upper line, and that the indications of a lower line, which we have been following for the last 120 yards, are illusory, due, if anything, to tumble from the upper-line—here the only one. But if, as the writer is persuaded, there are real traces of walling in the first 45 yards, it must have continued for the rest of the way, because the only place where the north-east stretch of the lower line could have merged is before that, round the rocky knoll; and there are no signs of an actual merger.) The upper line from about this point crosses a rocky outcrop where it is marked only by scattered blocks, few clearly footings of a wall face. From here the two diverge, but both run downhill (fig. 3, A), the lower one very obliquely for about 20 yards, to negotiate the crossing of a ridge of rock which leads them down over a sloping shelf and, converging again, to the edge of a further rocky escarpment. Below runs another shelf along the top of the high precipice above the Queen's Drive. This lower shelf may have been barred by a single dyke, but the traces are uncertain except for an otherwise inexplicable series of

blocks near the edge, which continue the direction of the upper line below a natural gully.

The northern end of the double dyke (fig. 3, D) can be traced beyond the banks with which our consideration of the problem began. The upper bank, after crossing a low natural hillock, turns slightly uphill. After 35 yards (some 15 yards *beyond* the corner of the large enclosure) it turns rather sharply uphill alongside the modern path to the Summit. After another 20 yards, scattered sandstone blocks beside and lying in the pathway show that this crosses its line. Thereafter the surface of the hillside may have slipped away down the steep slope to the Dry Dam valley, and traces of the dyke do not reappear beyond—unless the path marks its back for a stretch. The lower bank continues for 8 yards beyond the lower enclosure, but then, as indicated by stray mounds, diverges from the upper line towards another hillock, tapering off, however, before reaching it, thus leaving a gap 12 feet wide. A green hollow like a quarry-ditch runs along the back of this rather faint tapering portion. The upper slope of the hollow, which is more distinct, seems to be continuous with a stony bank which forms the north-west side of the entrance to the large enclosure. On the other side of the present path is a corresponding stony bank which does not continue as far as the lower dyke. The banks look too regular to be simply due to the clearing of fallen dyke stones from the path, and the gap in the lower line with the hollow and bank behind suggest an oblique walled-in entrance. At any rate there is no suggestion of a gap anywhere else in the whole work. There are no remains of any structure running up the steep side of the lower hillock unless an isolated group of stones may be such, and for a few yards the top too is bare. But just inside the crest round the north-east quadrant of the knoll there is a green hollow, again suggesting a quarry-ditch. The bank dug from it, which we may assume once crowned the crest, has, however, gone. The north-west side of the hillock, which runs back towards the upper dyke, drops sharply to the Dry Dam valley. Perhaps it was under surveillance, for there is a rather faint indication of what could be a small hut floor (20 feet across) just above the end of the quarry-ditch.

The very existence of a double line, of which the inner is stronger than the outer, most massive and widely spaced where the ground is least steep, the rising up against the crag, and the behaviour of the southern end, all suggest a defensive position. This alone explains the divergence and turns at the northern end, where two natural hillocks are incorporated in the lines and where the upper line turns away uphill not only as if to hold the head of the steep slope to the Dry Dam, but also to avoid being overlooked if the outer knoll were lost. Only a few men could infiltrate into the position from the rear, up the gullies and narrow places all in turn commanded by the devious crags of the Lion's Haunch and the Summit.

Only excavation could, if lucky, give an idea of the period of the work, but the extent to which the lower line has disappeared entirely suggests a considerable age. Moreover, the main bank was no doubt much in its present condition when the enclosure wall was built. Traces of a small turf enclosure behind the lower hillock also seem secondary to the lower bank.

The work, it must however be confessed, falls into no recognised class, though parts of the, so far unrecorded, outer works of Dalmahoy Hill fort (*Ancient Mon. Com. Report*, Midlothian, No. 217) indicate similar structural principles. This may suggest a "dark age" date, as the fort is analogous to several known to be of that period. The problem is perhaps further complicated by a somewhat similar—but single and simple—terraced line (Pl. XVIII, 10) with some massive revetment blocks, which cuts off a large corner of the Salisbury Crags. There the remains have been surmounted by a stone-faced turf dyke demonstrably contemporary with the largest extent of the Camstone Quarry, which has taken a huge bite out of the older work.

DUNSAPIE FORT.

The traces of the presumably early iron age fort which surmounted the top of Dunsapie Crag are indistinct. As already recorded (*Ancient Mon. Com. Report*, Midlothian, No. 10), a single rampart ran near the edge of the more precipitous parts, marked chiefly by footings and small stones, and along the top of the eastern slope, where it forms in places quite a massive bank. A pear-shaped area some 150 by 75 yards is enclosed (Pl. XVIII, 11). The rampart bank is 55 yards uphill from the back of the scooped enclosure described above on p. 163, while the "later dyke" shown in fig. 2 continues uphill to cross the rampart just north of the entrance, 20 yards from the fort's northern end. From the corner there a horn-work seems to have run downhill to crown a shoulder of rock—footings indicate a wall 9 feet thick; the shoulder overlooks a path, which may therefore mark the original approach. Further, from the top of the path the boundary dyke mentioned on p. 164 runs eastwards to form a large loop, ultimately almost rejoining the fort's rampart at the southern end. The area so enclosed may in all probability have been an annexe to the fort, and some of the small levelled hollows scattered about may therefore represent huts of the fort period. The sole inner and outer entrances to the structure were close together, for other than at the path there is no gap in the outer dyke, except for the demonstrably secondary entrance to the scooped site. Along the western flank of the crag, almost a third of the way down, there is what is more likely to be an outer defence on that side than a cultivation terrace.

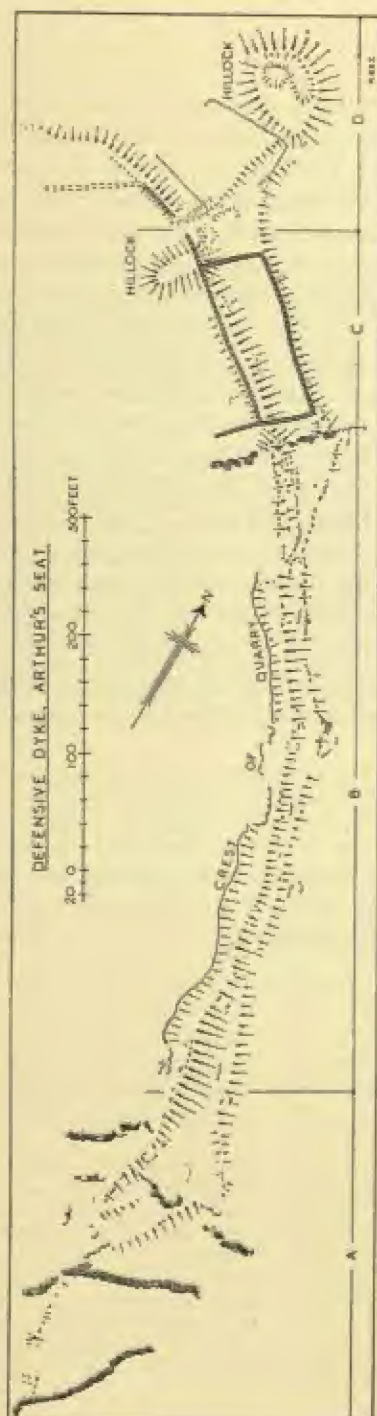


Fig. 3. Defensive Dyke, Arthur's Seat (Site 9).

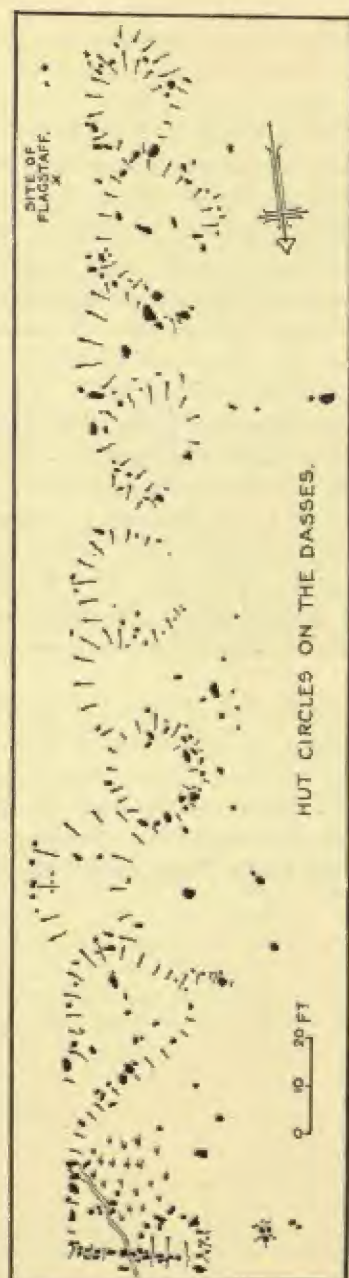


Fig. 4. Hut-circles on the Dasses, King's Park (Site 12).

HUT-CIRCLES.

The last important feature in the Park to which attention is now drawn may be considered the oldest of all. Situated on the second highest of the Dasses which forms a tiny secluded valley over 170 feet above the Hunter's Bog, there is a row of hut-circles nestling into the edge of the debris that has come down from the Lang Raw (Pl. XVIII, 12, and fig. 4). The lower end of the valley has been closed by a stone-faced bank through which there runs away the water from a spring. This flows out under boulders that once, no doubt, were part of a protecting wall. The line of the wall merges after half a dozen yards into the lower edge of a circle marked by a level space 23 feet in diameter. Although there are then some rather indefinite artificial features, the next hut 25 feet away is very distinct, particularly the wall-footings of its western half. The internal diameter had been under 20 feet. The remaining four huts 10 to 15 feet apart except the last two, which touch, vary in size and distinctness. The end one, barely 16 feet across inside, is most clear, being not only cut more into the hillside than the others, but having had to be banked up outside. It will be noted on the plan that the upper edges of most of the huts appear to have been connected by a scarping of the slope. The total length of this little "village" is just under 50 yards.

For completeness we must note the existence of what may be another hut circle, 25 to 30 feet in diameter, at the head of the lowest of the Dasses.

In conclusion I have to thank the Ministry of Works for permission to make plans of the sites in the Park, and for their unavailing search for pre-1800 records; also Messrs O. J. Beilby, R. Carnon, W. R. Chalmers, H. J. H. Drummond, and W. K. Smith for assistance in surveying, and Mr C. S. T. Calder for preparing some of the plans for publication; and finally the Park Keepers for their most friendly interest.

NOTES.

1. A LATE BRONZE AGE SPEARHEAD MOULD FROM CAMPBELTOWN.

The mould which is the subject of this note was first published in the Society's *Proceedings* for 1864 (vol. VI), and again by Evans.¹ It was found with another mould while breaking up ground near Campbeltown, Argyll, and two stone axes were said to have been associated. When this find was first reported upon it was described as being a mould for two spearheads, one on each side of the two valves. This statement can, however, be modified in the light of more recent knowledge, and some information can be gathered concerning the approximate date and cultural affinities of the makers of the spearheads.

The mould is, of course, of two valves, and on one pair of faces are the matrices for casting a small leaf-shaped spearhead with loops on the socket; on the other pair are matrices for casting a small oval tanged blade which would be more accurately described as a knife or razor than as a spearhead. During the last few years both these types of bronze objects have been studied, and the information concerning them is briefly as follows.

The spearhead with side loops on the socket is a type which developed in Britain, but in the case of this example and some others the shape of the blade has been influenced by the intrusive Late Bronze Age spearheads with leaf-shaped blades, for the purely native blades have an angular base, recalling their derivation from Early Bronze Age daggers.² We can infer, therefore, that our Campbeltown mould was made soon after the leaf-shaped spears began to arrive, either by trade or invasion, and that it was probably the work of a native craftsman who still wished to retain the loops to strengthen the shaft in the socket rather than to imitate the intrusive metallurgists, who used wooden pegs for this purpose. One other point is worth mentioning here. We need not assume that our mould was made immediately after the foreign spearheads began to arrive, for they came first to the south and east of England,³ and the earliest hybrid spearheads of our type are thought to have been used on the periphery of the area first occupied from overseas. Datable examples have been found in the south from three Late Bronze Age settlements, Thorny Down⁴ and South Lodge⁵ in Wiltshire, and New Barn Down in Sussex,⁶ all belonging to the intrusive Late Bronze Age which Professor Hawkes would place at about 750 or 700 B.C.⁷ In addition to these examples from settlement sites, Professor Hawkes mentions a few other associated Late Bronze Age examples, and to these may be added an example from Stump Bottom in Sussex.⁸ This came from a small personal group of

¹ *Ancient Bronze Implements of Great Britain*, p. 437.

² See Hawkes in *Proc. Prehist. Soc.*, vol. vii. (1941), pp. 128-31.

³ *Archæologia*, vol. lxxxiii. (1933), p. 197.

⁴ *Proc. Prehist. Soc.*, vol. vii. (1941), pp. 114-33.

⁵ Pitt-Rivers, *Excavations in Cranborne Chase*, vol. iv.

⁶ *Sussex Arch. Coll.*, vol. lxxv. (1934), pp. 138-70.

⁷ "The Pottery from Sites on Plumpton Plain" in *Proc. Prehist. Soc.*, vol. i. (1935), especially pp. 57-59. Hencken would prefer a rather later date and his argument may be found in *Arch. Journ.* vol. cii. (1945), pp. 7-9.

⁸ *Ant. Journ.*, vol. vi. (1926), pp. 444-8.

belongings rather than a founder's hoard, and can be used to give a later date to the "Sussex loops" found with it than has previously been possible.

Supposing then that this kind of spearhead was being made for use against the invaders in the south and east of England in about 700 B.C., it can safely be assumed that at some date after that the fashion spread northwards as the invaders extended the initially occupied areas, and as more trade with the Continent developed. All this suggests a date in the seventh century or later for the Campbeltown mould.

We must now look at the other face of the mould—at the small oval blade which could be described as a razor or knife. Note that the jet is also shown, leading into the tang, in the illustration (Pl. XX, 1). In a recent study of the razors¹ it was possible to demonstrate two main classes of razor, of which the bifid type seems to be intrusive, while the oval type, like the one now under discussion, was native. There are three main concentrations of the native razors in the British Isles: in Scotland round the Firths of Tay and Forth and in Sutherland, in North-east and Western Ireland, and in the Wessex region of Southern England. Whether the type originated in the south or the north it is not yet possible to be certain, but in the north examples are frequently associated with cordoned urns, and this is also found to be the case in Ireland. In the south there is evidence to show that they were in use at the time of the Deverel-Rimbury sites such as South Lodge, for which, as we have already seen, a date in the late eighth or seventh century B.C. (on current dating) would be appropriate.

So it is clear that our mould is a most valuable aid to the synchronism of dates in the north and south of Britain, and since so few bronze implements are associated with pottery or other datable objects during the Late Bronze Age, the deductions we can draw here are especially significant. The vast majority of moulds of all types come from the north, and probably reflect the natural sources of the metal ores, and perhaps of stone suitable for making moulds. While in the Late Bronze Age, as throughout the duration of the British Bronze Age, the main centres of metallurgy were in the Highland Zone, yet the frequent presence of "jets" and unfinished castings in southern English hoards show that much casting must also have been carried out in the Lowland Zone, probably by itinerant metal-smiths.

To summarise our conclusions the following points emerge:—

1. The mould provides a partial synchronism in date between the south of England, where datable examples of the class of spear represented on it have been discovered, and the north of Britain.
2. The razors of simple oval outline are known to have been made by the users of cordoned urns in the north, and by *native* Late Bronze Age peoples in the south, at some date not much before the late eighth or early seventh century B.C. That we find the same people casting so-called "hybrid" spearheads strongly suggests that the cordoned urn people were the metallurgists responsible for these types also.

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¹ *Proc. Prehist. Soc.*, vol. xii. (1946), pp. 121-41.

2. A LATE BRONZE AGE "RAZOR" FROM ORKNEY.

The bronze blade which is the subject of this note was found some thirty years ago, but has not previously been recorded.¹ It was found in a stone cist in a mound known as Laughton's Knowe in the parish of Holm on the mainland of Orkney (*R.C. Inventory*, No. 368). From the description of this mound in the *Inventory* it is almost certainly of prehistoric date, and it is not unlikely, therefore, that this cist and cremation represents a Late Bronze Age secondary burial inserted into an earlier mound. Within the cist, details of which have not been preserved, was a heap of cremated bones, on the top of which lay the bronze blade incased in the remains of a wooden sheath (Pl. XX, 2).

The blade is double edged and tanged, and measures 3 inches in length by 1.3 inches in width. In addition to this the tang is 1 inch long and .3 inch broad where it joins the blade. The thickness of the blade is approximately 0.1 inch, and it was cast in one piece with the tang.

The instrument is heavily corroded, and its details are therefore obscured, but it is clear that one of the sides is flat, and that the other had a midrib which is now clearly visible only in the lower half of the blade. A slight depression seems to run down each side of the midrib. The standard of the casting is unskilled, much below that usually displayed in the Late Bronze Age. The simple character of the implement stresses the caution with which one can assign any date to it, for such a blade might have been cast at widely different times. But there is a group of blades, generally termed "razors," which are known to have accompanied many Late Bronze Age burials, and it is to this group that our example must belong. In Scotland a date for these from the sixth century B.C. to the end of the first millennium B.C. has been shown.² Closer dating than this is at present impossible, for in such remote places as Orkney, fashions already superseded further south might persist till quite late times.

Culturally these oval razors (Class I) belong to the users of cordoned urns, who frequently included a razor with their cremated burials. During approximately the same period another type of razor with a bifid blade (Class II) seems to have been in use, and this type was imported from the Continent and is never found with burials, though often in hoards. The two classes are therefore culturally distinct, though the shape of one may influence the other in regions where both occur. Both the width of the blade and the slight midrib on our Orkney specimen may have been due to influence of this kind, and in support of this we find that a Class II razor was found at Quoykea Moss, in the parish of St Andrews, Orkney.³ A list, complete to 1936, of other Bronze Age objects which have been found in Orkney will be found in the *Royal Commission on Ancient Monuments Inventory*, vol. i. p. 59.

The two fragments of wooden sheath were found, one on each side of the razor. These were submitted to Mr M. Y. Orr of the Royal Botanic Garden, Edinburgh, and have been tentatively identified by him to be hazel (*Corylus Avellana*). Though, no doubt, frequently associated with razors, it is very rarely that a sheath has survived in a recognisable form, and the only other examples known from the British Isles came from Priddy, Somerset,⁴ and Armoy, Co. Antrim.⁵ The Priddy sheath was made of wood, and the one from Armoy of leather.

C. M. PIGGOTT.

¹ It has now been presented to the National Museum of Antiquities, Edinburgh, by Mr P. Sutherland Graeme.

² *Proc. Prehist. Soc.*, vol. xii. (1940), pp. 121 ff.

³ *Arch. Journ.*, vol. xvi. (1859), pp. 148-9.

⁴ *Proc. Soc. Ant. Scot.*, vol. lvi. (1921-22), p. 350.

⁵ *P.R.I.A.* (1906-7), p. 123.

3. INSCRIBED PANEL AT SOUTH HOUSE, LIBERTON.

The farm of South House incorporates the shell of an old building, to be demolished shortly, which evidently represents part of the old mansion-house. A number of original carved details can be seen here and there in the structure, the most interesting of which is a square stone panel measuring 2 feet 2 inches in height by 2 feet 4 inches in width, and having a moulded margin 4 inches wide on top and sides. On its surface, which is otherwise plain, the initials W S and E Q are carved in relief, together with the date 1671. The initials are said to be those of William Stoddart, a former proprietor of South House, and of his wife Elizabeth White (Qhite).¹

In the east gable two original window-openings appear. The jambs and lintel of the lower one are finished with an edge-roll moulding 3 inches wide, and several fragments of a similar moulding have been built into an adjacent cottage which bears the date 1747. The upper opening, which has rounded arrises, still contains an original "shot-window" of oak, now much decayed, with a moulded transom 2 inches wide and, in its lower half, a moulded mullion 4 inches wide. Originally, no doubt, the upper half was glazed, but it is now built up; in the lower half there are two framed oak panels, each measuring 10 inches by 9 inches, and containing a lozenge with triply-rebated edges on a slightly raised field (Pl. XX, 3).

C. S. T. CALDER.

4. SOME LATE BRONZE AGE BURIAL CAIRNS AT MUSSELBURGH.

From the links at the edge of the Firth of Forth where Musselburgh Racecourse



Fig. 1. Musselburgh: sites of cairns in housing scheme roadway.

now lies, flat land stretches southwards some $\frac{1}{2}$ mile as far as the ridge on the end of which stood the Roman station of Inveresk. During the laying of drains and other services for the new Pinkie Mains West housing scheme on this land, a cinerary urn was struck in the middle of January 1947. Thanks are due to the workman, Mr Dickson, to the foreman, Mr Malloy, and to the Burgh Surveyor, Mr Dryburgh, who in turn reported the find. When I visited the spot all concerned were extremely helpful, labour was provided for further exploration, and later a site-plan was supplied (fig. 1).

The section visible in the housing-scheme trenches showed clean sand, unmixed with stones or gravel, over the whole area underlying nearly 2 feet of soil. The surface of the field is approximately 28 feet above O.D. Just where the urn had been found there was a considerable number of water-worn boulders lying in the spoil from the trench. They had been found close together over a length of ten or a dozen feet, in the centre of which the top of the urn was struck after the boulders had been cleared away. It stood mouth

upwards (fig. 2). Boulders still *in situ* in the side of the trench formed, with

¹ Good, *Liberton in Ancient and Modern Times* (1893), p. 153.



1. "Razor" and spearhead cast from the Campbelltown mould.



2. Bronze razor from Orkney with fragments of its wooden case.



3. Window with panels, at South House, Liberton.



1. Musselburgh: Urn No. 3 *in situ*.



3. Musselburgh: Cairn 2 partly removed, showing pebbles; arrow points to Urn No. 3, still covered.
(Width of photo 10 feet.)



2. Urn No. 3. (J.)

the brown earthy sand among them, a horizontal layer a foot or more thick whose top was 3 feet 9 inches below the field surface. The section in a cross-trench showed that close to where the stones ceased, and on a level with just above their base, there started a horizontal dark band in the sand, an inch or so thick. Above this the sand was markedly yellower than for some distance below it.

It therefore seems as if the dark band marked the old turf-line, with zone of weathering below it, of the land surface on which a low cairn had been built to cover the cinerary urn. At some subsequent date sand had again blown over the



Fig. 2. Musselburgh: Urn No. 1. (1.)

area burying the cairn deeply. A minor detail noted was that the dark band at the point examined did not come right up to or underlie the boulders, though the weathered zone did: suggesting that the turf had been stripped in the preparation for heaping the cairn on the spot.

Mr Dryburgh pointed out that some stones were visible on the south side of the same cross-trench but about 20 feet further west. Part of a second cairn was then quickly exposed and remains of cremation burials were found among its stones. Proper exploration was put off till the following day, when Professor and Mrs Piggott kindly came to assist.

Pl. XXI, 3, shows the cairn about 10 feet across as it projected from a north-south cutting. The eastern edge, nearest the camera, and the north-east quadrant

had been removed partly by the original trench and partly by the previous day's trial hole. Though the excavation was not continued further west, it is probable that the cairn was only some 8 feet across in that direction. It will be seen that slabs laid flat and rounded boulders had been heaped in no particular order, and interspersed with sandy soil and hundreds of white quartz pebbles large and small. At one point these pebbles formed a layer 9 inches thick. There were besides a few water-worn pieces of coal, particularly near the south edge. One boulder was on edge, but this seems to have been accidental. It should be mentioned that only one or two white pebbles seem to have been dug up with the boulders of cairn 1. The slabs, also absent from cairn 1, were yellowish sandstone and most of the boulders reddish or yellow sandstone; two whinstone boulders were noted from cairn 1. The old turf-line was level with the base of

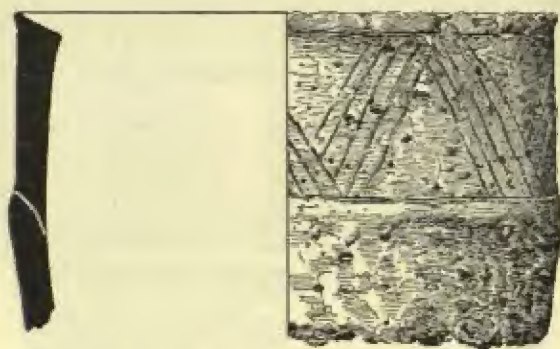


Fig. 3. Musselburgh: Urn No. 2. ($\frac{1}{4}$.)

the cairn; and a continuation of it rose up over the stones at the south edge, showing that grass had grown over the cairn. No turf-line was noted at the base of the cairn.

Only a couple of feet in from the edge of the north-east quadrant there were found the remains of an urn (fig. 3). It had rested on a slab which was flat on the ground. One overlying layer of boulders closely surrounded the rim, which was all that was left of it. Clearly the cairn had once risen higher than this, unless the upturned base of the urn had been left projecting. Any lowering must, however, have taken place before the sand submerged the old surface.

A foot away to the south-west, at the same level as burial 2, an urnless heap of cremated bones also lay on a flat slab (burial 3). Burial 4, similarly urnless, was found 2 feet from it to the south-south-west, a little to the right of the projecting heap of pebbles in the photograph. At a rather higher level and a foot or so south of the centre of the cairn was a larger mass of cremated bones and earth about 18 inches across—burial 5 (fig. 4, for which I am indebted to Professor Piggott).

The primary burial below the centre of the cairn was contained in an urn sunk mouth downwards in the undisturbed sand. The base was on a level with the ground surface of the time (fig. 4 and Pl. XXI, 1). The rim rested on a squarish sandstone slab. The filling of the straight-sided hole consisted of dark sandy soil containing fragments of cremated bone and charcoal. Two small drops of bronze were in it too, near the base of the urn. This filling had been heaped a

little above the base of the vessel. Some inches above it had been placed the largest slab in the cairn.

A third cairn was identified 140 yards south-south-east of the first. Next day it was examined by Mrs Piggott. She reports that it was slightly smaller than the others, and outlined by stones set on edge. There were no quartz pebbles contained in its make-up. Unfortunately, before the character of the cairns had been recognised, a pipe-line about 18 inches wide had been cut through the middle of this one from north to south, with the result that very little of the central cremation remained. A large slab of sandstone just to the west of the pipe-line covered the greater part of a circular hole, cut into the undisturbed sand subsoil. This contained about a quarter of a cremated burial (No. 7) and two minute

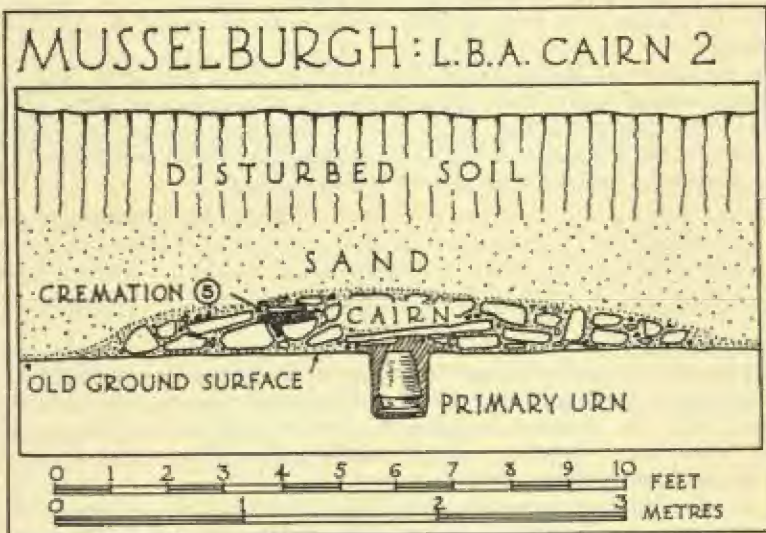


Fig. 4. Musselburgh: section through Cairn 2.

crumbs of pottery. Though it is possible that an urn may have been cut away by the pipe-trench, it is also possible that the burial had been an unaccompanied cremation, since the remains of the hole containing it were in the nature of a shallow scoop rather than a hole designed to hold an urn.

Urn No. 1.—Only one side and the base remain of this vessel, which was rather roughly made, 11½ inches high, of a grey-brown colour. Two cordons have been applied at about 2½ inches and 5½ inches below the rim, the upper having one thin scored line below it and two above. Two similar lines run below the rim outside. In addition there are comb impressions running in a line round the centre of the upper panel. A similar line runs just below the rim, and a third round the lower edge of the hollow bevel inside.

Urn No. 2.—Only the upper portion remains, light brown outside and dark inside. The rim, 8½ inches in diameter, is hollow-bevelled with a slightly everted lip. At one point on the rim there are scored a series of lines. A single cordon runs 3 inches below the rim, and above it there is an irregular chevron formed of bundles of scored lines bounded above and below by a single horizontal line.

Urn No. 3 (burial 6) is intact, 9½ inches high and 8 inches across at the mouth

(Pl. XXI, 2). Its colour is buff, with patches of red. The inside is steeply bevelled from the rim to a moulding nearly 1 inch below it. Outside there is a single cordon 4 inches below the rim, and above it widely-spaced vertical lines of comb impressions with a similar horizontal line above and below them. The bones which it contained were far less comminuted than was the case with those from the other burials, which were in fact so small that no indication could be obtained of years or sex. In no cremation preserved in the Museum are there such large fragments of bone remaining. When the urn was emptied it was found that the largest pieces, such as femur heads, had been placed in the urn first and the fragments were progressively smaller nearer the top. Throughout, green stains occurred on a number of bones, suggesting the former presence of drops of melted bronze from some object burnt on the pyre. Dr Osman Hill kindly examined the bones, which he considers to be those of a very young adult, and, to judge by their slowness, possibly female.

The urn cemetery at Musselburgh described in *Proc. Soc. Ant. Scot.*, vol. xxviii (1893-94), lay rather more than three-quarters of a mile due west of the recent discoveries. The urn published as No. 11 in that account is less similar to the new urns than would appear from the illustration, being considerably smaller, and its decoration in reality whipped-cord impressions.

R. B. K. STEVENSON, *Keeper*.

5. A CIST CONTAINING SKELETAL REMAINS AT BONHILL, DUNBARTONSHIRE.

In the winter of 1940 a mechanical excavator, working at night, dislodged a stone cist from the top of the working face of the Strathleven Sand and Gravel Quarry at Bonhill. Immediately the discovery was reported the site was visited. It was found that the skeletal remains had been retained at the quarry by the Alexandra Transport Company, while three stone slabs of the cist had been removed to Strathleven Mains Farm.

Owing to the kindness of Mr Humphrey Ewing Crum Ewing, Strathleven House, the skeletal remains were removed to the Glasgow Art Gallery and Museum (Reg. No. 40-25).

The stone slabs of the cist are of brownish-yellow sandstone, probably from the local Old Red Sandstone. The largest, which was probably the cover-stone, measured 5 feet 5 inches in length and 3 feet at the widest part. The thickness of the slab was 7 inches. The other two stones, from their size and appearance, were probably end stones.

From the report given by the operator of the mechanical excavator it seems that the cist lay a foot or so below the surface. The stone slabs and the skeletal remains were recovered from the foot of the working face of the quarry. As in the case of the later discovery, described by Miss Anne S. Robertson,¹ it is probable that this was a flat grave with no marking by a mound or cairn. The exact geographical location of the discovery here described and of the 1943 discovery is shown on the plan given in Miss Robertson's paper.

Skeletal Remains.—A very careful search was made by the author and his technical assistant, Mr J. Broolly, to retrieve as much as possible of the skeletal remains, and sufficient was discovered to allow a fairly accurate description to be given. It is estimated that they belong to a man about forty years of age, and about 5 feet 6 inches in height. The parts retrieved consist of skull, fragments of

¹ Robertson, *Proc. Soc. Ant. Scot.*, vol. lxxviii. (1943-44), p. 128.

ulna, right humerus and radius, two metacarpals, four fragments of vertebræ, ten right and two left ribs, damaged pelvis, right femur, right and left tibiæ, right fibula, left calcaneum and left talus.

The following are the measurements of the skull:—

	millimetres		millimetres
Glabello-occipital length . . .	195	Occipito-frontal arc . . .	410
Maximum breadth . . .	140	Antero-posterior diameter of	
Glabello-nasal length . . .	192	foramen magnum . . .	35
Basi-bregmatic height . . .	132	Basi-alveolar length . . .	96
Orbital width, L.	38		
Orbital height, L.	33.5	Cephalic Index	71.79
Ophryo-occipital length . . .	190	Vertical „	67.6
Nasion-opisthion length . . .	139	Orbital „	88.1
Nasi-alveolar height . . .	73	Gnathic „	83.5
Basi-nasal length	103	Nasal „	51.8
Horizontal circumference of		Dental „	43.69
cranium	540 ap.		

The appearance of the skull being greater in length than in breadth is confirmed by the measurements which give a cephalic index of 71.79, indicating the skull to be dolichocephalic. Thus this Strathleven burial is another example from the west of Scotland of a dolichocephalic skull in a Bronze Age short cist. It was pointed out by Professor T. H. Bryce that although the skulls of the short cist people are generally brachycephalic, some dolichocephalic crania do occur. In explanation of this admixture of the two types, Professor Bryce states that it "may indicate either that the skull form of the new race was not uniform but predominantly brachycephalic, or that there was a fusion of the new race with the earlier dolichocephalic inhabitants."¹

A full list of the other measurements has been deposited with the Society.

The author wishes to express sincere thanks to Dr G. M. Wyburn, Department of Anatomy at Glasgow University, for his help and advice in regard to the skeletal remains.

STUART M. K. HENDERSON.

6. "LOP-SIDED" ARROW-HEADS.

As recorded on p. 189, Miss O. Mullins has generously presented to the Museum an extremely fine lop-sided arrow-head, which was found long ago by her grandfather, Mr Norman Deggerman, near the Knaps, Killellan, near Kilmacolm. It is of dark grey-brown flint becoming paler towards the tip. Its total length of 2.55 inches includes a single barb almost an inch long. The barb is thus slightly longer than that on a much broader arrow-head from Airhouse, BMA. 86, incomplete, which is much the longest of those preserved in the Museum. The workmanship is also considerably more careful than that of the latter, which is indeed rather rougher than is normal for an arrow-head of this type. A rare feature of the Kilmacolm arrow-head is, however, that the whole of one face is carefully retouched right up to the three edges, while only the two shorter edges are retouched on the other (ventral) face (fig. 1).

¹ Bryce in *The Book of Arran*, "Archæology," 1910, pp. 130, 131.

As is well known, one of the distinguishing features of lop-sided arrow-heads is that one of the long sides is formed of the edge of the primary flint flake untouched on either face. J. G. D. Clark has demonstrated that a continuous typological series exists linking the petit-tranchet or transverse arrow-head of Mesolithic times, where the cutting edge was at right angles to the arrow-shaft, through the "halberd" types to lop-sided arrow-heads.¹ He made the distinction that the halberd types (types E-F) were in the direct line of development from the petit-tranchet, while the lop-sided (types G-I) represent devolution or divergent development from the main group.

Whether the "halberd" heads really belonged to arrows and how they were hafted is highly speculative; their cutting edge was in all probability oblique

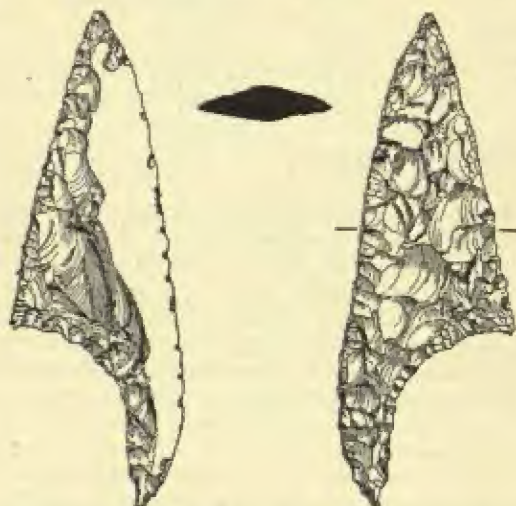


Fig. 1. Arrow-head from Killellan, Kilmacolm, Renfrewshire. (J.)

to the shaft. That the lop-sided heads belonged to small hafted knives was the view of the Rev. G. R. Buick,² but at any rate those without pronounced barbs and with a symmetrical hollow or even straighter base (Clark, type G) seem unlikely to have been hafted very obliquely; the usually very sharp point was clearly intended for piercing. Despite these difficulties the typological connection is reasonably convincing, and Clark's grouping of various types under the general name of "petit-tranchet derivatives" is supported by the similarity of context in which the flints have often been found—on the fringes of the beaker invasion.

An examination of upwards of 80 lop-sided arrow-heads in the National Collection (the exact boundary between these and the halberd type, or even the purely triangular ones, being as Callander and Clark pointed out very indefinite) makes it apparent that Clark's series does not go far enough: it does not reach the Kilmacolm specimen if, as he says, "in every case one edge at least consists of the original edge of the primary flake"; and again, "in no case is there any secondary flaking on either of the main faces of the implement." However, we may safely continue the series further, for, inclusive of one from Ormiegill, Caithness, illustrated by Clark without comment, more than a dozen of our less markedly

¹ *Archaeological Journal*, vol. xci. 1934.

² *Proc. Soc. Ant. Scot.*, vol. xxii. 1887-88.

barbed examples (type G) and nine of the single-barbed ones (type H) are retouched on all sides. Usually the third side is only trimmed on one face, as on the Kilmacolm example, thus retaining a "reminiscence" of the petit-tranchet edge. In these totals I have omitted specimens where the third side was partly retouched as a part of the process of forming the point, and also a dozen cases where the trimming might well not be due to the original maker (compare for example Clark, No. 43). In addition there are half a dozen specimens worked fairly completely over one or both faces, thus finally discarding the advantage of the petit-tranchet technique. These various typologically late specimens which have lost the characteristic petit-tranchet edge otherwise retain the forms of types G and H.

There are specimens of both types, with and without working on the petit-tranchet edge, which are marked by very fine pressure-flaking scars. Such ripple flaking is relatively rare in Scottish flint work, but a dozen fine examples on these



Fig. 2. Broken arrow-head from Oulbin Sands, Morayshire. (f.)

arrow-heads, besides as many others of less high quality, come from all over the country, *i.e.* Oulbin Sands (5) (fig. 2), Kildrummy (1), Tentsmuir (1), Blairgowrie (1), Lauderdale (1), Wigtownshire (4). Two specimens illustrated by Clark, from Woodhenge, Wiltshire, show the same marked feature. In passing we may note that ripple flaking is a characteristic of some large knives found in the Arran chambered cairns, *e.g.* Giant's Graves, in which beaker sherds have been found too; but the fineness and regularity of some of the lop-sided arrow-heads is not equalled on other Scottish flints.

Yet another point: Callander¹ pointed out that a selection of flints from north-east Scotland will contrast in its general coloration with a selection from the south-west, reds and yellows predominating in the former and light grey among the latter, while in the south-east all varieties of grey are found shading into black. But lop-sided arrow-heads form a striking exception, as he mentioned. Among the 80 lop-sided specimens examined there are no reds or pinks, and only three purely yellow. Indeed the predominance from all localities of dark colours—grey, yellow-grey, yellow-brown, and brown—is remarkable; even pale grey appears less common than one would expect. The colour scheme of the whole collection of these lop-sided flints contrasts with any sample of leaf-shaped or tanged-and-barbed arrow-heads, where dark flints are relatively scarce. A further striking feature is the number of dark or rich brown lop-sided arrow-heads: 8 from the south-east, 5 from the east, and 7 from the north-east. Two slightly hollow-based arrow-heads from the south-west are of this colour.

¹ *Proc. Soc. Ant. Scot.*, vol. lxi. (1927-28), p. 172.

Brown flint, using the same standard to distinguish it from yellow or grey-brown, is otherwise represented in the thousands of flints in the Museum—scrapers, arrow-heads, and so on—by at most 40 specimens. One particularly rich shade appears native to the south-east—notably Lauderdale—but no evidence exists at the moment to suggest a trade in it. Rather it would seem that the makers of lop-sided arrow-heads from Caithness to Wigtownshire had a traditional preference for dark flint, besides a fairly standardised idea of the shape they aimed at, and a fondness for ripple flaking. In fact they are likely to have been scattered or wandering parts of one people.

The *a priori* typologically related halberd group (Clark's types C-F) is, again considering those in the National Museum, on the whole lighter and more varied in colour, though pinks and yellows are by no means as common from, say, the Culbin Sands as one would expect, and the typical yellowish-red of north-east Scotland completely absent. Two from the south-east are of rich brown flint, while the example from Ormiegill is made of the same dark flint as the lop-sided arrow-heads from the same cairn (Clark's Nos. 22, 45, and 46). The halberd group is often quite roughly made—that from Ormiegill is one of the best—and there is no example even approximating in workmanship to the finest lop-sided arrow-heads, though of course some specimens from the latter group are equally rough.

R. B. K. STEVENSON, *Keeper*.

7. NEW VITRIFIED FORTS.

Specimens of vitrified stone have lately been received from two sites in western Ross, a district in which vitrified forts had not previously been known. The first is from Dun Lagaidh, on the south shore of Loch Broom, at the narrows above Ullapool. Mrs Gibb, who found the vitrified matter, reports that it came from the remains of a fort of oblong shape which adjoins the ruins of the broch. The second is from An Dun, on the neck of a little promontory projecting into Gair Loch just south of Gairloch Village. Mr C. A. Gordon reports that the fort is extremely dilapidated and that the remains are almost wholly grassed over.

A. GRAHAM.

8. CIST BURIAL AT BO'NESS.

In the middle of October 1946 the discovery of a skeleton buried in a cist at Bo'ness was reported in the press. It was thereafter visited by Mr Samuel Smith, Corresponding Member, and subsequently by myself. The cist lay 5 yards to the south of the Grangemouth road at a point 50 yards south-west of the Snab Brae crossroads (O.S. 6" Map (1921), Linlithgowshire. Sheet No. III. N.E.). On the map the 25 feet contour runs through the site from north to south, and the ground drops from there to the Gil Burn on the west. The upper surface of the ground had been considerably disturbed at various times, there being about 2 feet of fairly recent building rubbish and earth upon the highest side slab. This was 2 feet 2 inches high, the lower 12 inches of it being sunk into a layer of comminuted shells which appeared to mark an old beach-line. The top of the shell layer, according to Mr Smith, is 22.87 feet above O.D. At least three side slabs of the cist had been removed at the time that this skeleton was discovered. This fact,

and also the removal of the bones themselves, made difficult any exact estimate of the original length of the cist. It seems probable, however, that it was at least 5 feet long, the bearing of its long axis being 165° magnetic, the head lying towards the south. On the east side there were at least three side slabs, the only one remaining *in situ* when visited being 1 foot 7 inches wide and, as already stated, 2 feet 2 inches high. Not much more than 1 foot 10 inches west of it a side slab had been removed by the workman, exposing behind it two slabs 1 foot 4 inches and 1 foot 2 inches wide respectively, both of red sandstone, one of which was lying at an angle of less than 45° tilting away from the long side of the cist. It was embedded in dark brown earth, which contained rounded pebbles and boulders. Similar earth but without the pebbles covered the shell heap around the grave to a depth of 1 foot. To the north of these two stones, but overlapping them slightly, and in a line with the one which had previously been removed, was a yellow sandstone slab 1 foot 3 inches wide, whose position indicated that the grave at that point had been less than 2 feet wide.

From these mutilated remains it is probable that the burial in question was a long cist of the type generally ascribed to the Early Christian period.

R. B. K. STEVENSON, *Keeper*.

9. AN IRON IMPLEMENT AND OTHER RELICS FROM FALLA CAIRN, ROXBURGHSHIRE.

In the *Proceedings of the Berwickshire Naturalists' Club* for 1929¹ Mr P. B. Gunn describes the excavation, in the previous year, of a Bronze Age round cairn situated 650 yards S.S.W. of Falla Farm, in the parish of Jedburgh, Roxburghshire.²

The cairn, which measured 70 feet in diameter and 5 feet in height, was composed of surface stones and soil, and there was a layer of loose stones on some parts of the bottom as if to level irregularities in the ground. On the original ground surface, to the east of the centre of the cairn, was a short cist sealed with a cover-stone on which rested a boulder 2 feet in diameter; the ends of the cist were formed of single slabs, and at each side were three slabs with a layer of thin slabs on the top. The report continues: "The cist contained fragments of incinerated bone. Nuts, beech and hazel, were lying on the floor, also fragments of an iron plate; these had doubtless been introduced at some recent opening: the irregularity of the top of the cairn suggests such an occurrence. An urn may possibly have been removed at that time." In the centre of the cairn, also on the original surface, was a heap of stones lying north and south and extending a little beyond either end of the cist. On top of this heap were burnt bones, while directly above it, but only 18 inches below the surface of the cairn, were more burnt bones associated with fragments of a cinerary urn. Dr W. C. Osman Hill has kindly examined the bones and has found no evidence against their all having come from a single individual. Lastly, a flint scraper was found in the body of the cairn on the west side.

The relics were deposited in the National Museum at the time, and have recently been formally presented to the Museum by Mrs Oliver of Edgerston.

The cinerary urn (Pl. XXII, 1) is of "collared" type, that is to say typologically

¹ Vol. xxvii. pp. 104-6.

² National Grid Reference 36/705133.

early in the development of urns. Though very fragmentary it has now been restored, with some degree of certainty, to give a height of 14.7 inches, with a diameter at the mouth of 12 inches and at the shoulder of 13.2 inches. The rim is simply rounded. The collar, 2 inches high, is decorated with four rows of deep oblique cuts arranged in a herring-bone pattern. Under this the neck is deeply hollowed, and bears impressions of a thick whipped cord to form alternating panels of horizontal and vertical lines. Below the neck the undecorated body, as usual a muddy-brown colour, contracts sharply to the base which is only 4 inches across.

The scraper is roughly circular and made from a broad flake of pale grey flint, retouched nearly all round. The maximum diameter is 1.15 inch and thickness .35 inch.

By far the most interesting discovery, however, are the iron fragments stated to have been found in the cist. Although this is literally true, the fragments were not present in the cist when it was first opened: they appeared there the following morning, having evidently fallen in from the side of the trench during the night.¹ The fragments were badly corroded and only the largest piece—a plate 6½ inches long, 4-4½ inches wide, and ⅛-¼ inch thick—has survived. From the base to a little over half the length of the plate the sides are parallel, and equipped on one face with flanges which no doubt gripped a wooden stock: beyond that point there are no flanges, and the sides splay out slightly to the cutting-edge which is set at a narrow angle to the short axis of the blade. The back of the plate is flat. A similar implement was included in the Romano-British hoard of iron objects found at Blackburn Mill, Berwickshire,² while the Museum possesses other examples from Traprain Law and the Roman fort at Newstead. The exact purpose of these implements is conjectural. Professor Childe has described the Blackburn Mill specimen as a hoe,³ but Mr F. G. Payne, who is shortly to publish a paper on the subject in the *Archaeological Journal*, informs me that he considers them to be ploughshares. Until his paper appears it will be wiser to suspend judgment, though it may be remarked that, while the presence of a ploughshare in a cairn is difficult to explain, a digging-implement could easily be the legacy of a secondary burial in the Iron Age or Roman Period. Finally, it is necessary to make one important amendment to the description of the skeletal remains in the report. While the bones found on top of the stone-heap in the centre of the cairn are, as stated, exclusively incinerated, the handful of bones found in the cist comprise both burnt and unburnt fragments, of which the latter are by far the most numerous. Dr Hill reports that the unburnt bones came from a reasonably grown adult.

What light does the foregoing reconsideration of the relics throw on the sequence of interments in the cairn? In the first place, the excavators' assumption that the cist had been previously rifled is not borne out by the evidence. The cist itself showed no trace of disturbance; the absence of an urn is, unfortunately, an all too common feature of this type of burial; and hazel-nuts not infrequently accompany both Neolithic and Bronze Age interments.⁴ Whether the cist represents the primary burial, as the excavators thought, is, however, an open question. The fact that it was eccentrically placed in the cairn is not, in itself,

¹ Information from Mr James Fairbairn and confirmed by Mr Gunn.

² *Proc. Soc. Ant. Scot.*, vol. lxxvi. p. 315, No. 59. Dr Joseph Anderson (Museum Catalogue, 1892) described it as part of a turf-spade for cutting peat, which the other so described, Curle's No. 92, certainly is as shown by its wing. Cf. E. E. Evans, *Irish Heritage*, figs. 87 and 89, 4.

³ *Scotland Before the Scots*, Pl. xvi. and p. 144.

⁴ E.g. *Archaeologia*, vol. lxxxv. p. 106; Mortimer, *Forty Years' Researches, etc.*, pp. 68, 176 and 193.

an insuperable objection to that view, since the cairn may well have been enlarged and reshaped at the time of the cremation burial. On the other hand, it is at least possible that the primary interment was not in a cist but in a pit beneath the stones in the centre of the cairn, and was missed by the excavators who did not penetrate below the original ground-level.¹ In this case the cist, like the cinerary urn, would be intrusive, while, if the cist burial were the later of the two, the fragmentary condition of the urn, and the dispersal of the cremated bones, some of which were found at a lower level in the cairn and others on the floor of the cist itself, would be explained. Short cists are not unknown in the Iron Age,² and the slab construction of the Falla cist is more appropriate to Iron Age than Bronze Age technique. The sequence of events suggested above is thus consistent with all the evidence, and at least provides an opportunity for the insertion of the iron implement into the cairn if it does not explain its presence. No emphasis is laid upon it, however, since the evidence is entirely inferential and may still be put to the test by re-excavation of the central area below the stone-heap.

KENNETH A. STEER.

10. A SHORT CIST AT ABERNETHY, PERTHSHIRE.

A short cist was found on 16th May 1947 when a trench for a telephone cable was being laid along the southern side of the road between Abernethy and Newburgh. Thanks are due to Messrs Robert Patterson & Sons, Airdrie, the contractors, for leaving the cist till it could be examined and removing the urn to safety, and to the Post Office telephone manager, Dundee, for notifying the Inspector of Ancient Monuments.

The site is half a mile north-east of Abernethy, where the road runs along a slight ridge in the undulating slopes that lie between the hills and the flats beside the River Earn, and more exactly at spot height 129 half-way between Pitcurran and Elmbank (O.S. 6" Map (1901), Perthshire. Sheet No. XCI. N.W.). The top of the massive coverstone had not been disturbed by the roadmakers, though it came close up to the surface of the grass verge. The stone was rather irregularly shaped and measured 3 feet by 2 feet 2 inches, with a maximum thickness of 17 inches and a minimum of 9 inches. Its under-surface was, however, quite smooth and overlapped the sides of the cist considerably. The cist had been internally only some 16 by 23 inches. The magnetic bearing of the long axis was 50° east. The north-west side was formed by a slab 23 inches high, 21 inches broad, and 9 inches thick. The slab on the south-east, 25 by 23 inches, was only 2½ inches thick, and was supplemented by another 2 inches thick which lay flush against it outside. The end slabs seem to have been formed of two halves of a single tabular boulder with rounded sides, split to get a flat surface. The dimensions were 23½ by 16 inches and 25 by 16 inches, with a maximum thickness at one side in each case of about 6 inches. All slabs were of sandstone.

The cist had been set in the natural gravel subsoil containing small boulders and sand. The bottom of the cist had been sandy, and about the centre a small food-vessel lay on its side. There were no traces of the skeleton. The vessel is only 4½ inches high with a rim diameter of 4½ inches (Pl. XXII, 2). It is vase-shaped with rather thick walls, buff-coloured on the surface. The inside had been rather rough and the outside very smooth, but some of the surface has flaked off where it was in contact with the ground, and over most of the remainder the

¹ Information from Mr Gunn.

² R.C.H.M., *Midlothian*, p. xxi.

original finish has decayed. Two low raised mouldings encircle it $\frac{3}{4}$ and $1\frac{1}{4}$ inches below the rim. Twelve horizontal rows of close-set impressions of short lengths of whipped cord cover the body, sloping in alternate directions, and there are two rows on the flat sloping rim.

Perth County Council has kindly agreed to its being placed in the National Museum.

R. B. K. STEVENSON, *Keeper*.

11. VIKING MARKERS IN S.E. NEWFOUNDLAND.

Traces of old Norse settlement are now being sought in Newfoundland. An Icelandic map of 1572 shows the *northern tip* of Newfoundland as "Wineland." And there archaeologists are trying to locate the "Booths-of-Leif" described in old records.

Meanwhile in my address to the Historical Society at St John's I stated that the Norsemen often chose an *isthmus between bays* for settlement; and I showed maps and views of such spots (and finds) in Scandinavia.

Members of the Society volunteered to take me to the one outstanding isthmus in Newfoundland—the *isthmus of Avalon* in the south-east part. It is only three miles wide and lies between two bays, one extending north into the Polar Stream and one south into the Gulf Stream. There is no other such isthmus on Newfoundland.

It was on this isthmus at a remote point called Belle-view on the northern bay, but only a few miles from the southern bay, that two stones were seen, fashioned and placed like the Viking markers on similar sites in Scotland, Denmark, and Scandinavia.

The two stones lie flat on a broad, high, sandy beach. We had to reach the spot by row-boat, because of tides. A fisherman, probably of French extraction, rowed us over. Our guide, Frank Pinsent, said the slabs were known as "ancient burial stones," but how ancient no one knew. No similar stones of Eskimo, Indian, or of early French or British settler are known. High tides (he thought) had washed them down from some higher spot. The stones are heavy, but tides and currents from the Polar Stream are strong in Trinity Bay.

After careful examination I found these slabs very like *bauta-sten*, the memorial stones known to archaeologists of the north. I have examined many such stones—with expert guidance—on *isthmuses between bays* in Norway, Denmark, and Sweden.

Such memorial stones were customarily set up by North-men of the eleventh (and earlier) centuries, overlooking some water-way where they might be seen by passing sailors. (From a similar site the standing-stones at Lundin look over Largo Bay.)

In my article on Scotland in the *National Geographic Magazine* for April 1936 attention is called to other standing-stones that may be of Norse origin. But the Avalon slabs resemble rather two standing-stones in Argyll, described in *Proc. Soc. Ant. Scot.*, vol. lxxvii. p. 41.

The Argyll stones are "each about 2 feet wide and, respectively, 3 feet and 3 feet 9 inches high." The Avalon stones (as shown on Pl. XXIII) are slightly smaller, but the cut bases are concealed 3 inches deep in the sand.

The stones are held for photograph by Frank Pinsent: 1, with rough-hewn faces towards the light; 2, set as they probably once stood, facing the north bay.

The other bay (Placentia) is only about three miles south-west.

The Vikings often chose building sites whence they might easily sail out in one direction or the opposite. The advantages of Avalon are evident. New settlers could land here, sailing down from Greenland with the swift Polar Stream. The



Map of Avalon Peninsula, Newfoundland.

nearness of the southern bay (and Gulf Stream) makes the climate milder than at any other spot on the northern coast; milder even than New England (where the Gulf Stream is further out to sea). Wild animals from the north, I learned, were wont to cross the isthmus for winter forage. Records of the "Greenland-men," as the settlers were called, stress the fact that at the Booths-of-Leif "cattle might

feed out all winter." They also stress the heavy dews. The dew-fall on the isthmus of Avalon is *very* heavy, because of the closeness of the Gulf to the Polar Stream.

No other such conditions obtain on any other isthmus of the island. Other recorded data—the abundance of "wine-berries," the wild wheat, the high tides, the strong current, the length of the mid-winter day—apply to other sites as well.

A copy of the Icelandic map is submitted (Pl. XXII, 3), because experts seem more and more inclined to regard it as fairly accurate in locating not only Wineland, but the two spots in Labrador where settlers from Greenland usually stopped over. The Greenland men skirted the coast in their fishing (or trading) boats. These craft seem to have been about 75 feet in length, 15 feet in width. With favourable weather they followed the swift-flowing current from Greenland waters to northern Labrador in two days; then to southern Labrador in two days and to Wineland in two days more. They seem to have come quite easily from Greenland to Newfoundland—with stop-overs—in a week's time.

To come further south (if they had wanted to) was another story. For the Gulf Stream, as well as the prevailing wind, is from west to east. Their records tell of two boats, one bound for Wineland, one for Greenland, that were carried out by wind and wave—to Ireland.

MAURICE P. DUNLAP.¹

12. A SURVEY AND POLICY OF FIELD RESEARCH IN THE ARCHÆOLOGY OF GREAT BRITAIN. PART I. THE PREHISTORIC AND EARLY HISTORIC AGES TO THE SEVENTH CENTURY A.D. *Council for British Archaeology, London, 1948. Pp. 120. 5s.*

The object of this booklet, which has been prepared by a panel of experts under the joint editorship of Professors Christopher Hawkes and Stuart Piggott, is to consider briefly the present state and future direction of British field research in archaeology for the Prehistoric and Early Historic periods. It will be followed in due course by a second part, which will cover likewise the later Pre-Conquest, Medieval, and Post-Medieval periods.

The booklet is divided into two chapters. Chapter I outlines the present position of our knowledge, from the point of view of field research, for each convenient period of the Prehistoric and Early Historic Ages of Britain, while Chapter II consists of a statement, for each of the same periods, of the outstanding problems which appear to the writers to have primary importance for any systematic policy of field research, and some practical recommendations bearing on them whether by deliberate field-work or excavation, or for turning chance discoveries to good account.

The booklet is designed not only for specialists but for the many who, pursuing archaeology in their spare time, will wish to be better able to add to the common fund of knowledge in discovering, or in rescuing and preserving, fundamental data in the field.

Fellows of the Society, and members of other Societies affiliated to the Council, may obtain copies of the booklet at the reduced price of 3s. 10d. (including postage) on application to The Secretary, Council for British Archaeology, c/o Institute of Archaeology, Inner Circle, Regent's Park, London, N.W. 1.

K. A. S.

¹ Maurice Pratt Dunlap, M.A., F.S.A.Scot., formerly American Consul in Dundee, Norway, Denmark, and Sweden successively.

A paper on "The Wineland Voyages," by John R. Swanton (81 pp.) has just been issued by the Smithsonian Institution, Washington (*Misc. Coll.*, vol. cvii, no. 12).—[Ed.]



1. Urn from Falla Cairn, Roxburghshire.
(c. 1.)



2. Food-vessel found at Abernethy, Perthshire.
(Slightly less than half-size.)



3. Icelandic Map showing "Winland."



4. Part of sculptured slab (with oghams), from Whiteness, Shetland (see p. 193).

KENNETH A. STEER, R. B. K. STEVENSON, AND MAURICE P. DUNLAP.

[To face p. 188.



1. Memorial stones at Avalon, Newfoundland.



2. As they probably once faced the north bay.

MAURICE P. DUNLAP.

DONATIONS TO AND PURCHASES FOR THE MUSEUM,
1946-47.*Donations.*

(1) Relics from the links south of Hedderwick Sands and west of Hedderwick Burn, on the Tyne Estuary near Dunbar, East Lothian. Of the several hundred Neolithic and Bronze Age potsherds many were described by the late J. Graham Callander in the *Proceedings*, vol. lxiii. The collection also includes four hundred flint implements and various objects of stone. Presented by the finder, JAMES S. RICHARDSON, F.S.A.Scot., with the permission of the Right Hon. the Earl of Haddington, M.C., T.D., F.S.A.Scot., President.

(2) Bronze palstave from Gavinston, Duns, and a collection of stone implements, including over eight hundred of flint and very many fragments, from Lauderdale and adjacent areas. About a hundred of the flint implements come from the prolific Airhouse Farm. Presented by the late H. READMAN, Maxwell Place, Kelso.

(3) Various stone objects found on Airhouse Farm, Lauderdale. Dumb-bell-shaped bronze stud, length .85 inch, having a serrated collar on either side of the central bar, probably from Newstead Fort (fig. 1, 4). Presented by J. R. FORTUNE, Corresponding Member.

(4) Twenty-six worked flints and three of chert; three spindle whorls; a jet pendant, .9 inch by .85 inch by .2 inch, in the form of a Maltese cross, having inscribed on one face six dot-and-circles. Found on the Farm of Trabroun, Lauder, Berwickshire. Flint knife found by the donor on Flockhouse Farm, Blairadam, Kinross-shire. Presented by GEORGE S. GUTHRIE, Cockairney Feus, Cleish, Kinross.

(5) Tanged and barbed arrow-head and the butt-half of a flint knife. Found by the donor, S. G. FINGLAND, in his garden at 100 Carrick Knowe Avenue, Edinburgh.

(6) Lop-sided arrow-head of dark grey-brown flint, found near the Knaps, Killellan, Kilmalcolm, by the late Norman Deggerman, the donor's grandfather. (See Notes, p. 179.) Presented by Miss C. M. MULLINS, F.S.A.Scot.

(7) Two small flint cores and a worked flake, found in the garden of "Fourwinds," Port Dunbar, Wick, by the donor, CHARLES BEGG, F.S.A.Scot.

(8) Carved ball of granite, having six low cylindrical bosses. Labelled "TAR CARIDE N.B.," believed to be from Aberdeenshire. Presented by A. D. LACAILLE, F.S.A.Scot.

(9) Stone ball, grey-green in colour, having six flat knobs, found in the

Rusky Burn, Port of Menteith, Perthshire. Presented by A. MacKEITH, Fettes College, Edinburgh.

(10) Stone axe of dark grey schist with rough surface, length 6.4 inches, found at Gallow Hill, Monikie, Angus. Presented by JAMES F. ANTON, Bridge of Cally, Perthshire.

(11) Axe of polished flint, patinated yellow-brown, one corner broken, the edges slightly flattened. Found at Caldham, Kinnordy, Angus, in 1835, and formerly in the Lyell collection. Presented by the GEOLOGICAL DEPARTMENT, University of Edinburgh, per Professor S. Piggott, B.Litt., F.S.A.Scot.

(12) Grooved hammer-stone consisting of an oval pebble of igneous rock, found at Newton Stewart, Wigtownshire. Presented by F. SULLEY, The Lodge, The Avenue, Bedford Park, London, W. 4.

(13) Hammer consisting of the base of a red-deer antler, length 3.75 inches, maximum diameter of shaft hole 1.05 inch. Found at Watnall, Nottingham, "in the sandstone rock." Presented by J. BRELSFORD, Foo Shan, Fairlight Cove, Sussex.

(14) Two sherds of a Neolithic B rim, found on Glenluce Sands by the donor, JAMES S. RICHARDSON, F.S.A.Scot.

(15) Relics from excavations at Rinyo, Rousay, Orkney, in 1946. (See above, pp. 34-42.) Fragmentary Neolithic bowl of dark corky ware, and part of the upper part of another of rather gritty ware, black at the core, both decorated in Unstan fashion, from a chambered cairn at Kierfea Hill, Rousay. Fragments of rather coarse hard reddish-buff pottery from a mound underneath the farm of Swandale, Sourin, Rousay. Fragments of a quadrangular steatite urn with two grooves below the rim, and a cleat-like object of steatite 2 inches long, from a cist at Trumland, Rousay. Relics from the excavation of a long house at Swandro, Rousay. Presented by the late WALTER G. GRANT of Trumland, F.S.A.Scot.

(16) Food-vessel, found in a short cist near Abernethy, Perthshire. (See Notes, p. 185.) Presented by PERTH COUNTY COUNCIL.

(17) Five food-vessels and portions of two others; cast of miniature food-vessel, .8 inch high; half a dozen pieces of an undecorated vessel with a red exterior; eleven barrel-shaped beads of jet; sixty-eight disc-shaped jet beads, .25 inch or less in diameter, and three white ones; triangular splinter of flint; modern brass ring. From Greenhill Cairn, Balmerino, Fife. (See *Proceedings*, vol. xxxvi. pp. 635-53.) Several of the vessels have been on loan in the Museum for many years. Presented by Captain H. J. SCRYMGEOUR-WEDDERBURN, Birkhill House, Balmerino, Fife.

(18) Upper portion of a food-vessel, found in a cist during the excavation of a cairn at Kalemouth, Roxburghshire, in 1932. Presented by His Grace THE DUKE OF BUCCLEUCH, Drumlanrig Castle, Thornhill, Dumfriesshire.

(19) Fragments of a collared cinerary urn, an iron object, and a flint scraper, from the excavation in 1927 of a cairn on the Kip, Falla, Oxnam, Roxburghshire. (See Notes, p. 183.) Fragment of the upper portion of a reddish food-vessel (fig. 1, 1), found in a small cairn on Camphouse Farm, close to Camptown, Roxburghshire. Fragments of a grey food-vessel, with black core and inner surface, rim diameter estimated 6 inches (fig. 1, 2)—this vessel is extremely similar to one from Alwinton, Northumberland (*B.M. Bronze Age Guide*, 1920, p. 69 and fig. 60); knife of pale grey flint, 2·2 inches long, ·6 inch wide, retouched on both edges of the upper face, half of one edge being finely serrated, and another 1·6 inch long, 1·2 inch wide, the long sides retouched on alternate faces, both from under one of the kerb stones; from a grave-circle about 12 feet across, surrounded with stones, at about 800 feet O.D. on Camphouse Farm, near the Romano-British Fort, Edgerston. Portions of a reddish beaker, estimated height 8·5 inches, decorated with roughly executed notched impressions criss-crossed in horizontal zones, from Edgerston Estate. Presented by Mrs F. S. OLIVER, F.S.A.Scot.

(20) Cinerary urns from the Late Bronze Age cemetery at Pinkie Mains (West), Musselburgh. (See Notes, p. 177.) Presented by MUSSELBURGH TOWN COUNCIL.

(21) Late Bronze Age penannular "lock-ring" of gold, diameter 1·05 inch, of hollow triangular cross-section, each side consisting of a separate thin corrugated strip, joined together by folding the edges over (Pl. XXIV, 1). Found near the Biggar Water, Boghall, Lanarkshire. Presented by the finder, Miss G. I. C. GOVAN, 43 Nile Grove, Edinburgh.

(22) Bronze double-edged razor and part of its wooden sheath, found in Laughton's Knowe Cairn, Holm, Orkney. (See Notes, p. 173.) Presented by P. SUTHERLAND GRAEME, F.S.A.Scot.

(23) Relics from Midhowe Broch, Rousay, Orkney. (See *Proceedings*, vol. lxviii.) Bequeathed by WALTER G. GRANT of Trumland.

(24) Fragments of hand-made pot rims (fig. 1, 5-7), walls, and bases, one of the latter having in the centre an impressed dot-and-circle made with the finger-tips; pounders of pink granite; small steatite mould for a ring, ·75 inch in diameter; small lumps of pumice; part of a cast-iron cannon ball. From the Cumlins, Olnesfirth, Shetland (*Royal Commission Inventory*, No. 1363). Found when the edge of the mound was encroached upon by about 3 feet in constructing a farm road in 1935-37. (The vessel from the same site described in *Proceedings*, vol. lxxi. p. 23, is now illustrated in fig. 1, 8.) Presented by JOHN SUTHERLAND, The Cumlins, Olnesfirth, through Peter Moar, Corresponding Member.

(25) Fragments of a vessel of black pottery, having a bevel on the inside of the lip and a sharp shoulder 1 inch below the rim. Found under 4 feet of peat about $\frac{1}{4}$ mile north-east of the houses of Murrion, Eshaness, Northmavine, Shetland. Portion of a slab of red sandstone, sculptured on one side,

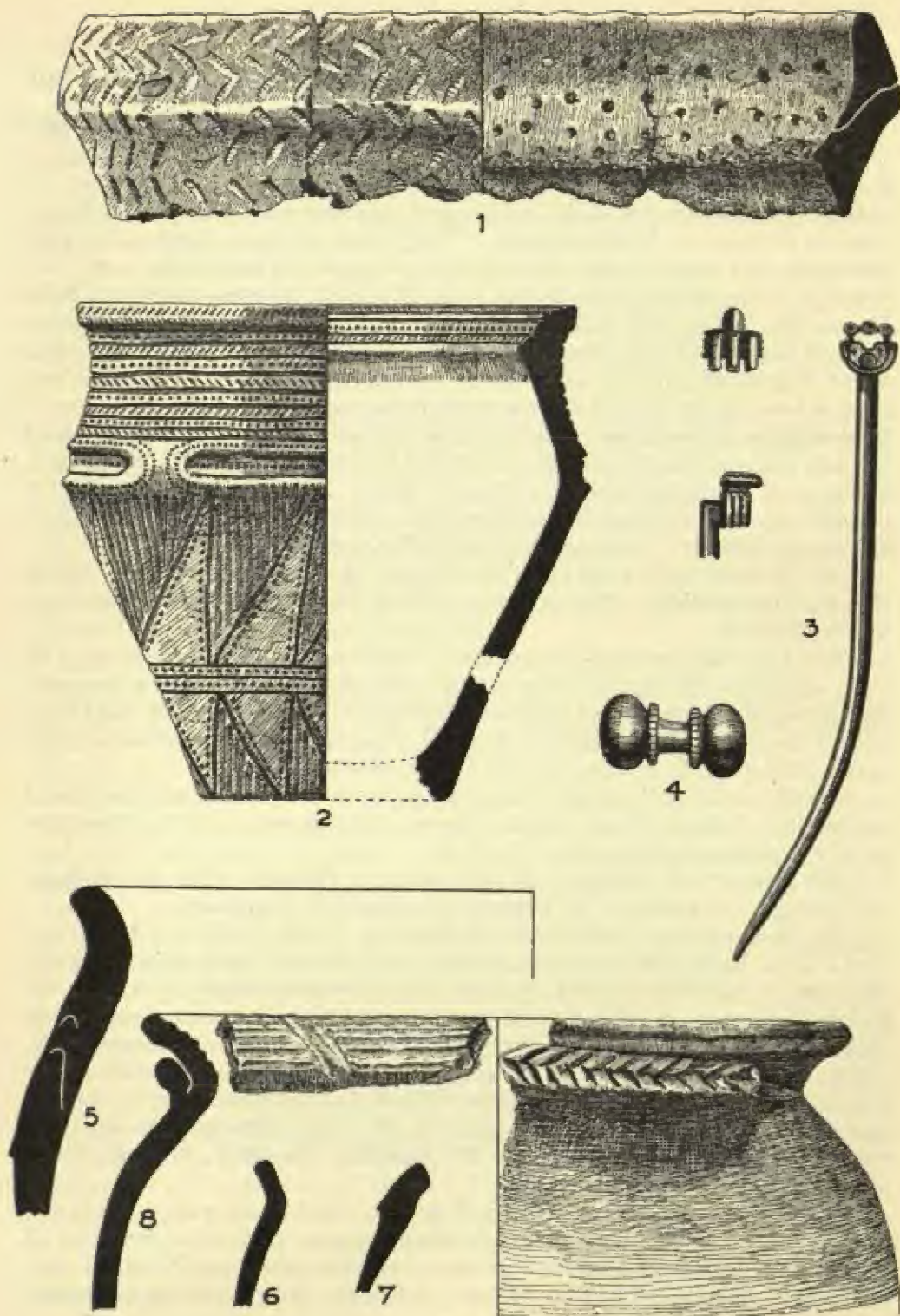


Fig. 1.

(1 and 2) Food-vessels from Edgerston, Roxburghshire; (3) Silver hand-pin, Freswick, Caithness;
 (4) Bronze stud, Newstead Fort; (5-8) Pottery from Olnessfirih, Shetland.

(No. 1 two-thirds; Nos. 3 and 4 full size; all the rest half-size.)

including near the edge four or five ogham letters (Pl. XXII, 4): the two apparent scores between N and A are much less definite than the others, and their ends were certainly not joined, while what might be interpreted as dots on either side of the stem line separating the words are probably accidental bruises. Portion of a slab of grey sandstone having a meander pattern sculptured on one side. Both from Whiteness, Shetland, having originally been dug up in the churchyard there. Presented by PETER MOAR, Corresponding Member.

(26) Penannular bronze brooch, less pin; the ring, 2·6 inches in diameter, is very thin, of circular cross-section, and has thicker elongated triangular terminals with faint traces of mouldings of zoomorphic character. Found about 1887 in a "Piets House" at Shurreray, Caithness. Ring-headed bronze pin and a slate whetstone found in the Viking grave at Reay (described in *Proceedings*, vol. lxi). Bronze strap-end found on Sandside Links, Reay, Caithness. (See *Proceedings*, vol. lxiii. p. 139.) Presented by ALAN D. PILKINGTON, F.S.A.Scot.

(27) Relics from the excavation of two homesteads, Crock Cleuch, Morebattle, Roxburghshire (see above, pp. 151-5). Presented by P. J. BRUCE, Mervinslaw, Jedburgh, per K. A. Steer, F.S.A.Scot.

(28) Relics from the further excavation of a hut-circle in Braidwood Fort, near Penicuik, Midlothian. Presented by I. G. H. WARDEN, South Slipperfield, West Linton.

(29) Cross-slab of sandstone, 2 feet 9 inches high, 1 foot 8·5 inches wide at top, and 1 foot 4·5 inches wide at bottom (described in *Early Christian Monuments* as Invergowrie No. 1): the edges are now seen to be carved—on top, a single row of key-pattern in squares; on the sides, a four-cord interlace broken by symmetrical loops. Part of a cross-slab of sandstone, 1 foot 5 inches high by 1 foot 5 inches wide (*Early Christian Monuments*, Invergowrie No. 2); it has suffered very considerably from the weather. Removed from the Old Kirk of Dargie, Invergowrie, for safe keeping, by the Ministry of Works, after consultation with the General Trustees of the Church of Scotland and Monifieth District Council.

(30) Wooden tub, the sides cut out of a single piece. Warped fragments, probably of the tub's lid. Fragments of a small tub found inside the first, and consisting of several staves having horizontal slots cut in them on the outside for dovetailing them together. Found some 5 feet below the original surface of a peat moss at Priesthoulland, Eshaness, Northmavine, Shetland. Presented by the finder, THOMAS THOMASON, Priesthoulland, Eshaness.

(31) Two roughly shaped sharpening-stones of schist, dug up in a peat moss about 500 yards north-west of Easter Alemoor Farmhouse, Hawick. Presented by Mr FERGUSON, Easter Alemoor, Hawick, per A. Graham, F.S.A.Scot.

(32) Two small pieces of coarse brown linen, backed by white paper

bearing the following inscription: "Piece of the sere cloth, taken from the body of King Robert the Bruce when exhumed, given to my brother, W. F. Watson, by Charles Kilpatrick Sharpe. Helen Aberdeen Watson. Part of which my brother gave me. H.A.W." Presented by E. HAMILTON GORDON, 30 Shrewsbury Road, Oxtou, Birkenhead.

(33) Pointed oval seal matrix of bronze, 2.65 inches by 1.75 inch (Pl. XXIV, 2), found in 1946 near some foundations beside an old road in field 71 (O.S., Northants, LXI. N.W.), Furtho Manor, Northamptonshire. A full-length facing bishop's figure, staff in one hand, the other raised in blessing, stands within a narrow Gothic arcade: above, in an elaborate trefoil-headed niche, are the Virgin and Child half length; at the sides, outwith the arcade, is the legend ·S: HĒRICI ·D'I ·GRĀ ·| ·EPI ·ABERDONEŃ. Gilding remains in the engraved parts of the matrix and on the edge, and there are traces on the back also. There was no spine or knob on the back, the only sign of any attachment being a crack in the metal at either end and the fact that the lower end has been broken off, which suggest a swivel mounting.

Henry de Lychtone, bishop of Aberdeen 1422-40, may be ruled out entirely on stylistic grounds, though his seal is not known. The only other Henry, le Chen (1281-1328), is known to have had a totally dissimilar seal.¹ The troubles of his times and his very long and chequered tenure might well explain a second seal, and the present find-spot. In that period, too, seal designers abandoned the plain bishops' figures for more elaborate devices,² and their experimentation might have exceptionally combined the half-length Madonna³ with the standing bishop, not to speak of the general elaboration of detail on our matrix. Dr Marguerite Wood, however, points out that the lettering is also peculiar. Presented by W. J. JONES, Furtho Manor, by Bletchley, Buckinghamshire, per the Northamptonshire Record Society.

(34) Fragment of the rim and lug of a hand-made pot, probably mediæval, of hard coarse fabric with a slip. Estimated diameter 10.5 inches, lip sharply everted to form a brim c. 1 inch wide. Found in Barbush sandpit, Dunblane, Perthshire. Presented by A. FLEMING, Barbush, Dunblane.

(35) Three-legged bronze ewer, found in old disused burial-ground on Innischonain, Loch Awe, Argyll, by Horace V. Blyth (son of E. L. I. Blyth, North Berwick), about the year 1885. Presented by GERALD P. MANDER, F.S.A., The Dippons, Compton, Wolverhampton.

(36) Three-legged skillet, 7.2 inches high, much damaged, and brass spoon with seal-top knob, found together in the moss at the Loch of Balshando, Lundie, Angus, over a century ago. Presented by Miss HELEN G. HENDERSON, 362 Blackness Road, Dundee.

(37) Six tempera paintings on wood of the Sybils—Persica, Libica,

¹ W. de G. Birch, *History of Scottish Seals*, No. 67.

² Birch, *op. cit.*, vol. ii. p. 17.

³ Cf. Birch, Nos. 71 and 93.

Delphica, Cumæa, Erythræa, and Samia, and an oak screen bearing initials and the date "1629"; from the old house of Wester Livilands, Stirling. (See *Proceedings*, vol. xxxiii. p. 387.) Presented by H. J. H. DRUMMOND, M.A., F.S.A.Scot.

(38) Arm-chair of pinewood, height 3 feet 10 inches. AB & IH, with date 1671 below, carved on head-piece, and pairs of scrolls at top of head-piece and in front below seat. From near Darvel, Ayrshire. Presented by Mrs G. B. ROBERTSON, Gateside Farm, Linlithgow.

(39) Bottle of dark, greenish-brown glass, globular shape, height 10·4 inches. Presented by R. MURRAY, The Willows, Grassendale Park, Liverpool 19.

(40) Parti-coloured wooden wine-slide, 5·5 inches in diameter, having an inlaid star in the centre, and the sides composed of staves feathered inside and diced outside. Presented by A. O. CURLE, C.V.O., LL.D., F.S.A., F.S.A.Scot.

(41) Length of fine hard tartan cloth of wool and silk, 26·5 inches by 73·5 inches, with initials IMP embroidered in one corner. This is the Macpherson of Crubin "plaid" mentioned in McIan's *Highlanders at Home*, 1848, pp. 118-19. Presented by Miss DOROTHEA I. HARRISON, "Sliab Fana," Newcourt Road, Bray, Co. Wicklow.

(42) Cream-coloured brocaded silk dress with underskirt, embroidered with many coloured floral design, also in silk, and having cream-coloured crochet work on front panels of dress and sleeves outlined in red silk thread. Long piece of Brussels bobbin lace. The dress, with the lace, is believed to have been worn at the Court of George II. Two pairs of lady's embroidered shoes. Paisley harness plaid of finely woven black cloth, with border; this shawl belonged to the donor's mother, in the 1860's. Presented by Mrs M. A. HAMILTON, Delgany, Jordans, near Beaconsfield, Bucks.

(43) Highland purse of chamois leather with brass clasp, the inside lined with blue silk and the outside covered with white damasked silk of which only part remains. Sold about 1870 as having belonged to Prince Charles Edward. Presented by Miss ELSIE J. KERR and Miss EILEEN M. KERR, 78 St Saviours Road, St Leonards-on-Sea.

(44) Eight eighteenth-century trade tokens. Presented by DUNCAN S. NAPIER, 3 Marchhall Road, Edinburgh, per J. R. Lockie, F.S.A.Scot.

(45) Seven eighteenth-century trade tokens. Presented by A. R. CROSS, M.C., F.S.A.Scot.

(46) Pewter tappit hen, height 10·5 inches, having scratched on the outside of the lid the initials IS EW. (See *Proceedings*, vol. lxxx. p. 154.) Presented by Miss D. RENNIE, 103 Glasgow Road, Bathgate.

(47) Brass fishing-reel, formerly belonging to Sir Walter Scott. Presented by Mrs M. N. CHRISHOP, 95 Mount Road South, Sunderland.

(48) Wooden tobacco pipe with screw-on bowl and horn mouthpiece,

which belonged to the donor's grandfather. Presented by D. A. H. BROWN, L.D.S., 7 Salisbury Place, Edinburgh.

(49) Horn spoon, deep bowl 6 inches by 5.2 inches across, tapering handle 9.2 inches long. Probably from Fife. Presented by J. J. COOPER.

(50) Wooden bowl turned out of one piece, height 5 inches, external rim diameter 11.8 inches. Formerly used as communal "brose caup" by the hired men at Cairncake Farm, Cuminestown, Aberdeenshire. Presented by Mrs M. COOK, Schoolhouse, Whithorn.

(51) Double-heart-shaped brooch of silver, 3.1 inches high, 2.2 inches broad; the rather elaborately scrolled members are engraved with leaf and scroll designs. On back hall-mark: thistle, WM, Gothic I damaged; above Head of William IV; below Gothic I. (Probably Edinburgh 1840-41.) Presented by JAS. TAIT, F.S.A.Scot.

(52) Small white metal medal commemorating the repeal of the Corn Laws, 1846. Presented by Miss VERONA GOW, 19 India Street, Edinburgh.

(53) Knitting sheath of plain mahogany, length 6.9 inches. Presented in the name of Mrs MARYANN MCCALLUM.

(54) White silk parasol embroidered in white, a silk fringe at the top and edge; slender folding handle of ivory, with two silk tassels attached, and carved ivory tip and ring; overall length 28½ inches. Presented by Mrs AGNES KNIGHT, Brunswick Road, Douglas, Isle of Man.

Purchases.

(1) Socketed bronze axe with loop, from near Forres.

(2) Stone cup of globular shape, with an ornamental groove below the rim. Carved ball of grey-blue stone, with six low knobs, considerably damaged. No provenance.

(3) Cast, in bronze, of the La Tène bronze sword scabbard found near Bargany House, Dailly, Ayrshire, and now preserved in St Andrews University (Pl. XXV). By permission of the University Court.

(4) Silver "hand-pin," the lower half of the shank bent slightly (fig. 1, 3), 4 inches long. On the face two "trumpets" rise from a central roundel filled with blue enamel, subdividing the spandrels, which are filled with pale green enamel marbled with red; the same green and red enamel fills three grooves on the edge, and there are also traces of green enamel in the front of the three "fingers" which surmount the head. Found in a ruined structure on Freswick Links, Caithness.

(4a) Bronze strap-end, 1.8 inch long, with decoration cast in high relief (Pl. XXIV, 4). Ascribed by Professor Haakon Shetelig, Hon.F.S.A.Scot., to the Norse eleventh-century "Urnes style." Found on Freswick Links, Caithness.



1. Penannular "lock-ring" from Boghall, Lanarkshire (Donation 21).
2. Impression from seal matrix of Henry, Bishop of Aberdeen (Donation 33).
3. Electrotpe of "Kames Brooch" (Purchase 6).
4. Bronze strap-end, from Freswick, Caithness (Purchase 4a).

(All slightly over full-size.)

[To face p. 106.



(a)



(b)

Photograph of (a) the original Early Iron Age bronze scabbard from Bargany, Ayrshire, now in St Andrews University Museum; (b) enlargement of lower end (other side).

DONATIONS TO AND PURCHASES FOR THE LIBRARY. 197

(5) Alexander III long double cross silver penny; Alexander III silver farthing.

(6) Electrotpe of the back and front of the "Kames Brooch," long preserved by the Bannatyne family (Pl. XXIV, 3). Front, six small dragons in high relief, each grasping the rear paws of the one in front with mouth and left front paw, their tails being round each other's necks. Engraved in relief on the back, + (Maltese) IHESUS * NAZARENUS * CRUCIFIXUS * REX | IUDEORM (sic) * IASPER * * MEL * * PCHIOR * A in two concentric lines; and incised on the pin, ATROPA. The original is in the possession of Sir Malcolm Macgregor of Macgregor, who gave permission for the electros to be made.

(7) Silver forty-shilling piece of James VI, 1582. Formerly in the Cochran-Patrick Collection.

(8) Silver medal commemorating the battle of Sheriffmuir, 1715. Silver medal commemorating Reduction of Carlisle, 1745.

DONATIONS TO AND PURCHASES FOR THE LIBRARY, 1946-47.

Donations.

(1) *Memoirs of an Amateur Musician.* By Edmund H. Fellowes, C.H. Presented by the Publishers, METHUEN & Co.

(2) James Beattie's London Diary. Presented by ABERDEEN UNIVERSITY LIBRARY.

(3) *Scotland Before the Scots.* By V. Gordon Childe. Rhind Lecture for 1943. Presented by THE AUTHOR.

(4) Official Guide of Abbey of Inchcolm.

Elgin Cathedral.

Dirleton Castle.

The Abbey of Melrose.

Sweetheart Abbey.

The Castle of Stirling.

The Priory of Inchmahome.

The Castle of Balvenie.

The Abbey of Dundrennan.

Official Guide of The Castle of Edinburgh. By James S. Richardson, F.S.A.Scot.

All presented by H.M. MINISTRY OF WORKS.

(5) *Hallstattidens Relativa Kronologi, Del. 1.* Hallstatt A och B. By Sigge Hommerberg.

(6) *Clan Chattan*, vol. ii. No. 1.

- (7) *The Churches and Churchyards of Teviotdale.* By James Robson.
Dating of the Past. By Frederick E. Zeuner, D.Sc.
A History of English Clocks. By R. W. Symonds.
Scottish Monuments and Tombstones. Two volumes. By Charles Rogers, LL.D.
 Presented by ROBERT B. K. STEVENSON, M.A., F.S.A.Scot.
- (8) *Carrick Gallovidian.* By J. Kevan McDowall, F.S.A.Scot. Presented by THE AUTHOR.
- (9) *Journal of the Marx Museum*, vol. v. Nos. 72-73.
- (10) *The Coinage of Scotland.* By Edward Burns, F.S.A.Scot. Three volumes. Presented by The Right Hon. THE EARL OF HADDINGTON, M.C., T.D., F.S.A.Scot.
- (11) *Sword Moulds and Currency Bars.* By E. Wyndham Hulme. Presented by THE AUTHOR.
- (12) *Walsingham.* By H. M. Gillett, F.S.A.Scot. Presented by THE AUTHOR.
- (13) *Calendar of State Papers—Domestic, Addenda 1660-1685.*
Calendar of Treasury Books, vol. xvii. part i. (1702).
Calendar of State Papers. Spanish. Further supplement to vols. i. and ii.
Calendar of Treasury Books, vol. xvii. part ii. (1702).
Calendar of Close Rolls, Henry VI, vol. v. (1447-54).
Calendar of Close Rolls, Henry VI, vol. vi. (1454-61).
Calendar of State Papers. Venetian, 1673-1675.
 Presented by HIS MAJESTY'S GOVERNMENT.
- (14) *The Sutton Hoo Ship Burial.* Presented by the TRUSTEES OF THE BRITISH MUSEUM.
- (15) *Nieuwe Drentsche Volksalmanak, 1936-1945.*
Five Offprints (various).
 Presented by Professor A. E. VAN GIFFEN, F.S.A.Scot.
- (16) *Society of Friends of Dunblane Cathedral*, vol. v. part i.
- (17) *Die Schatzfunde Gotlands der Wikingerzeit.* By Martin Stenberger. Presented by KUNGL. VITTERHETS AKADEMIE, Stockholm.
- (18) *Hawick Place Names.* By W. S. Robson, F.S.A.Scot. Presented by THE AUTHOR.
- (19) *Aberdeen University Studies No. 123—The Founding of Marischal College, Aberdeen.* By the Rev. G. D. Henderson, D.D., D.Litt., F.S.A.Scot. Presented by THE UNIVERSITY.
- (20) *The Great Palace of the Byzantine Emperors.* Presented by Sir DAVID RUSSELL, LL.D., F.S.A.Scot.
- (21) *Fifteen parcels of Rubbings of Cup-marked Stones in Kintyre.* By the late Mrs Macalister Hall of Killean, Kintyre. Presented by Mr DUNCAN COLVILLE on behalf of the Kintyre Antiquarian Society.

DONATIONS TO AND PURCHASES FOR THE LIBRARY. 199

- (22) A Medieval Bronze Bowl from Leicester. By Frank Cotterill, M.A.
 (23) Kungl. Vitterhets Akademie Publication—Stenåldersboplatserna vid Siretorp i Blikinge. By Axel Bagge and Knut Kjellmark. Presented by AXEL BAGGE.
 (24) Catalogue of Musée Archéologique Liegeois, 1929. Presented by Mrs C. M. PIGGOTT, F.S.A., F.S.A.Scot.
 (25) Proceedings of the Spelæological Society of the University of Bristol, vol. v. No. 3.
 (26) Annals of Elgin. By Robert Young.
 History of Province of Moray. Three volumes. By L. Shaw.
 History of Moray and Nairn. By C. Rampini.
 Cordiner's Views. By Charles Cordiner.
 History of Nairnshire. By George Bain.
 Nether Lochaber. By the Rev. A. Stewart.
 Elgin Kirk Session Records. By Wm. Cramond.
 Barclays of Urie. By Henry Mill.
 History of Episcopal Church in Moray. By J. B. Craven.
 Rulers of Strathspey. By The Earl of Cassillis.
 Genealogy of Grant of Grant.
 Sobieski Stuarts. By A. Craig.
 Bibliography of various Scottish Counties.
 Annals of Cullen. By Wm. Cramond.
 Church of Ruthven. By Wm. Cramond.
 Church and Priory of Urquhart. By Wm. Cramond.
 The River Findhorn. By George Bain.
 Social Life in Former Days. Two volumes. By E. Dunbar.
 Moray Documents. By E. Dunbar.
 Province of Moray.
 Story of Culloden Moor. By George Bain.
 Nairnshire. By George Bain.
 Annals of Forres. By Robert Douglas.
 The Aberdeen Book Lover. Five volumes.
 All the above presented by Mrs A. B. B. BANNERMAN.
 (27) The Records of a Lancashire Family. By R. Cunliffe Shaw.
 Presented by JAMES DAVIDSON, M.B., Ch.B., F.R.C.P.E., F.S.A.Scot.

Purchases.

- Journal of Hellenic Studies, vols. lxiii. and lxiv. (1943 and 1944).
 Nineteenth-Century Token Coinage. By W. J. Davis.
 Römisch-Germanische Kommission, Band 17. "Die Megalithgräber der Iberischen Halbinsel." By Georg. and Vera Leisner. Two volumes.

Dictionnaire d'Archæologie Chrétienne. Tome 14A.

Proceedings of the First International Congress of Prehistoric and Proto-historic Sciences. London, August 1-6, 1932.

Camulodunum. Reports of Research Committee of Society of Antiquaries of London. No. XIV. By C. F. C. Hawkes and M. R. Mull.

History of the Family of Urquhart. By Henrietta Tayler.

The Small Sword in England. By J. D. Aylward.

British Calendar Customs, Scotland. By Mrs M. Macleod Banks, F.L.S. (1941).

British Calendar Customs, Orkney and Shetland. By Mrs M. Macleod Banks, F.L.S.

Water Transport: Origins and Early Evolution. By James Hornell.

Wallace Collection Catalogue of European Arms and Armour. By James G. Mann, M.A., F.S.A.

The Corstorphine Heirloom. By D. M. Thomson.

Antiquities of the Irish Countryside. By Sean P. O'Riordain.

Early Irish History and Mythology. By Thomas F. O'Rahilly.

Coins of the Roman Empire in the British Museum, vol. iv. (1940).

L'Art Primitif en Suisse. Texte de M. Lucien Mazenod.

L'Art Romain en Suisse. Texte de M. Waldemar Deonna.

L'Art Romain en Suisse. Texte de M. Françoise Fosca.

Felszeichnungen von Skåne. By Carl-Axel Althin. Vol. ii.

Fra Danmarks Ungtid. By Johannes Brøndsted.

Ancient Harvesting Implements. By Axel Steensberg.

Costumes of the Bronze Age in Denmark. By H. C. Broholm and Margrethe Hald.

Danmarks Bronzealder. By H. C. Broholm. Three volumes.

Le Village et le Paysan de France. By Albert Danzat.

Family and Community in Ireland. By Arensberg and Kimball.

The Surnames of Scotland. By George F. Black.

Handbook to the Roman Wall. By J. Collingwood Bruce, LL.D.

Revue Archeologique, Tomes xxv. and xxvi., two parts each.

Bericht der Römisch-Germanischen Kommission, 1939.

Mannus Bibliothek, Nos. 6, 22, and 28.

Danmarks Gedogicke undersøgelse, 11 Rackke, No. 66.

Zonengliederungen der Vorchristlichen Eisenzeit in Nordeuropa. By Carl-Axel Moberg.

Kulturhistoriska Studier. By Nils Aberg, 1938.

Tuneskibet, Norske Oldfund, vol. ii. By Professor Haakon Shetelig.

Monasterboice. By Professor R. A. S. Macalister, M.A., Litt.D.

Guide to Monasterboice. By Professor R. A. S. Macalister, M.A., Litt.D.

Early Sources of Scottish History, A.D. 500-1286. Two volumes. By A. O. Anderson.

Prehistoric Britain. By Jacquetta and Christopher Hawkes.

The Parish Chest. By W. E. Tate.

Border Antiquities of England and Scotland. By Sir Walter Scott.
(Two volumes).

Domestic Utensils in Wood, XVI-XIX Century. By Owen Evan Thomas.

ANNIVERSARY MEETING, 1st December 1947.

THE RIGHT HON. THE EARL OF HADDINGTON, M.C., T.D.,
President, in the Chair.

Dr E. W. M. Balfour-Melville and Mr William F. Arbuckle were appointed Scrutineers of the Ballot for Office-Bearers.

The Ballot having been concluded, the Scrutineers found and declared the List of the Council for the ensuing year to be as follows:—

President.

The Right Hon. THE EARL OF HADDINGTON, M.C., T.D.

Vice-Presidents.

Professor J. DUNCAN MACKIE, C.B.E., M.C., M.A.
ALEXANDER O. CURLE, C.V.O., LL.D., F.S.A.
Sir DAVID RUSSELL, LL.D.

Councillors.

Lady WATSON, M.B., Ch.B. }
ALEXANDER MAITLAND, K.C. }
WILLIAM HENDERSON, M.A.
Miss ANNE S. ROBERTSON, M.A.
WILLIAM ANGUS, LL.D.
Major IAN G. LINDSAY.
JOHN RICHARDSON, W.S.

Representing the Board of Trustees.

WILLIAM F. ARBUCKLE, M.A.
J. M. DAVIDSON, O.B.E., F.C.I.S., F.S.A.
Professor STUART PIGGOTT, B.Litt.,
F.S.A.
FREDERICK A. FERGUSON.

Secretaries.

DOUGLAS P. MACLAGAN, W.S. | ANGUS GRAHAM, M.A., F.S.A.

For Foreign Correspondence.

Professor W. M. CALDER, M.A., | W. DOUGLAS SIMPSON, M.A., D.Litt.,
LL.D., F.B.A. | F.S.A.

Treasurer.

JAMES J. LAMB, M.A., LL.B.

Curators of the Museum.

JAMES S. RICHARDSON.

IAN A. RICHMOND, M.A., LL.D., F.B.A.,
V.-P.S.A.*Curator of Coins.*

ROBERT KERR, M.A.

Librarian.

H. J. H. DRUMMOND, M.A.

A Ballot having been taken, the following were elected Fellows: James Percival Agnew, C.A.; Rev. Alfred J. Armour; Major D. S. Buist; John Clarke, M.A.; George F. Collie; Miss Catherine Durand; James D. S. Fulton; Joseph B. Himsforth, F.R.S.A.; William Johnston; James Keillor; Albert Edward MacColl, M.I.E.E.; Sylvester Lindsay Quine, M.C., A.M.I.E.E.; Robert Arnot Staig, M.A., Ph.D., F.R.S.E.; Homer L. Thomas, M.A.; Patrick Watt Thoms; William Turner, M.A.; V. J. Buchan Watt, M.B.O.U.

The Secretary read the following List of Members deceased since the last Annual Meeting:—

Honorary Fellows—Don Hermilio Alcalde del Rio; Professor Dr Robert Zahn.

Fellows—Sir William M. Baird, J.P., F.F.S.; Rev. D. G. Barron, O.B.E., D.D.; Miss Elizabeth Turner Bell, J.P., F.E.I.S.; The Most Hon. The Marquess of Bute, K.T.; Alexander D. Cumming; William F. Cuthbertson; Major A. R. Davidson; John Dinwoodie; Robert James Good, J.P.; Walter G. Grant of Trumland; W. G. Grieve; James Harrison, M.D., J.P.; Mrs Violet M. Hood; John Hunter; Alfred W. Johnston; Rev. D. McNeill Livingstone, M.A., F.R.G.S.; William K. Lyon, W.S.; H. G. MacColl, M.A., B.Sc.; John McCormick; C. M. MacGillivray of MacGillivray, M.D., LL.D.; Thomas McLaren; Rev. James Meikle, B.D.; George Milne; J. G. Napier; Rev. Gordon Quig, M.A., B.D.; Major I. H. Mackay Scobie; Charles Stewart, C.A.; Colonel Archibald Stirling of Garden; Charles Taylor; Major James Kennedy Tullis; Charles B. Boog Watson, F.R.S.E.

The Meeting resolved to record their sense of the loss the Society had sustained in the death of these Members.

The Secretary read the following Report by the Council on the affairs of the Society:—

The Council herewith submits to the Fellows of the Society its Report for the year ending 30th November 1947.

Fellowship.—The total number of Fellows on the roll at
 30th November 1946 was 822
 At 30th November 1947 the number was 867
 being an increase of 45

The number of new Fellows added to the roll during the year was 81, while 33 died, 3 resigned, and 2 allowed their membership to lapse.

Proceedings.—The Council decided that, in order to make up arrears, the volumes for 1945-46 and 1946-47 should be printed concurrently, and to save binding costs should be issued under one cover. Consequently it is hoped to issue Volumes LXXX and LXXXI jointly in the latter part of 1948. The contents are of a varied nature, archæological and historical. Printing and binding costs continue to rise, and economies have to be effected where possible.

The Museum.—

Staff.—The vacant post of Assistant-Keeper has been filled by the appointment of Mr Stuart Maxwell, M.A.(Edin.), who entered upon his duties early in October 1947.

Accessions.—The accessions during the year have increased to pre-war numbers; in addition to over 1300 flint implements, 536 objects were received by donation or bequest, and 12 were purchased.

The late Mr Walter G. Grant of Trumland, in addition to his past benefactions, and to the finds from the latest excavations at Rinyo and other sites, bequeathed the remainder of the finds from his excavations in the island of Rousay, comprising those from the Broch of Midhowe. Another notable accession of prehistoric material has come from Mr J. S. Richardson, F.S.A.Scot., who has collected over many years a great quantity of sherds, flints, axes, and other relics from the Late Neolithic-Early Bronze Age settlement site at Hedderwick, East Lothian. Another large collection of flints, presented by the late Mr H. Readman, comes from Lauderdale and the adjacent country. Particular mention must also be made of the Bronze Age burial pottery from Greenhill Cairn, Fife, presented by Captain H. J. Seryngeour-Wedderburn, and from various sites near Edgerston, Roxburghshire, presented by Mrs F. S. Oliver, F.S.A.Scot. A penannular gold ornament of the Late Bronze Age from Biggar was given by the finder, Miss G. I. C. Govan, and a bronze razor and remains of its sheath from Holm, Orkney, by Mr P. Sutherland Graeme, C.B.E., F.S.A.Scot.

The fine Early Christian cross-slab from Invergowrie has been placed in the Museum to prevent its deteriorating further. Mr A. D. Pilkington, F.S.A.Scot., has presented several Viking objects from Caithness. A remarkable seal-matrix bearing the name of Henry, Bishop of Aberdeen, and found in Nottinghamshire, was given by Mr W. J. Jones of Furtho Manor. Among the accessions of more recent period are six seventeenth-century painted panels of the Sybils, with oak panelling of the same period, from Wester Livilands, Stirling, presented by Mr H. J. H. Drummond, F.S.A.Scot.; a

wooden arm-chair, dated 1671, presented by Mrs G. B. Robertson; a very fine woven and embroidered lady's dress, *circa* 1760, presented along with two pairs of embroidered shoes and a lady's shawl by Mrs M. A. Hamilton; and a number of trade tokens given by Mr Duncan S. Napier and Mr A. R. Cross, M.C., F.S.A.Scot.

An enamelled silver pin of dark age date and a rare forty-shilling piece of James VI are outstanding among the purchases, which also include copies of two notable antiquities—the bronze sword-scabbard from Bargany, Ayrshire, and the fourteenth-century gold brooch from Kames Castle, Bute.

Loans.—Though it has not been customary to report objects placed on loan in the Museum, two extended loans initiated this year are of such importance as to require mention. Banff Town Council has deposited the unique Early Iron Age boar's head of bronze from Leitchestown, Banffshire,¹ in exchange for a facsimile; and Captain F. Maxwell Stuart of Traquair has deposited the two choir stalls from Lincluden College, latterly preserved at Terregles, Kirkcudbrightshire,² to which the surviving painted panel has generously been restored, for the period of the loan, by the Committee of Dumfries Museum.

Library.—In addition to exchanges, 63 volumes have been received by donation and 53 by purchase. A survey has been commenced of books no longer appropriate to the Library's purpose.

Librarianship.—As Mr R. B. K. Stevenson has expressed his desire to resign the office of Honorary Librarian, the Council tenders its sincere thanks to him for his services during the past year.

Treasurership.—The Council in January last regretfully accepted the resignation of Mr J. Bolam Johnson, C.A., and thank him for his loyal service to the Society over a period of 25 years. They now welcome as his successor Mr James J. Lamb, M.A., LL.B., who since February of this year has given much help to the Society, particularly in connection with the Financial Statement, already issued to members, which covers a period of two years instead of one, and in connection with Deeds of Covenant. Special attention is called to the opportunity that these deeds provide for increasing the funds of the Society without additional personal cost.

Excavations.—During the course of the year various excavations have been undertaken on behalf of the Society. Dr Bersu was engaged on further exploration of Traprain Law; Professor Piggott has excavated on Cairnpapple Hill, near Torphichen; Dr A. O. Curle has been doing further work

¹ *Proc. Soc. Ant. Scot.*, vol. vii. Pl. XLVI.

² *Archæological Collections of Ayrshire and Galloway*, vol. x. p. 164.

on the Forse "Wag"; Mr R. B. K. Stevenson undertook operations at Braidwood, near Nine-Mile-Burn; and Dr Richmond continued his work at Inveresk. The results of these investigations are eagerly awaited. Support has also been given to the newly established Field School of Archaeology sponsored by the Scottish Regional Group of the Council for British Archaeology in association with the Scottish Universities.

Rhind Lectureship.—As intimated in last year's Report, it was arranged that the Rhind Lectures for 1947 should be delivered by Mr James S. Richardson, H.M. Inspector of Ancient Monuments for Scotland, and it was hoped that this series of Lectures would have been delivered before now. While the material is otherwise in readiness, unforeseen difficulties have occurred in the preparation of lantern slides owing to restrictions in labour and material. The delivery of the Lectures may, therefore, have to be postponed to the beginning of 1948.

Gunning Fellowship.—The Fellowship for 1947 was awarded to Mr Robert B. K. Stevenson.

Chalmers-Jervise Prize.—A consolation prize of £2 was awarded to Miss Jean Sutherland of Galashiels, the only candidate. Efforts are being made to advertise the prize more widely in the coming year.

Address to the King.—A loyal Address to His Majesty, Patron of the Society, on the occasion of the marriage of Princess Elizabeth, was prepared by the President and forwarded to Buckingham Palace. This Address was read at the meeting, and is in the following terms:—

UNTO THE KING'S MOST EXCELLENT MAJESTY.

May it please Your Majesty.

We, Your Majesty's most dutiful and loyal subjects, the President and Fellows of the Society of Antiquaries of Scotland, incorporated by Royal Charter, present our humble duty to our Most Gracious Sovereign and Patron.

In our loyalty to and affection for the throne, the welfare and happiness of Your Majesty's person, and of each member of Your Majesty's family, is for us a subject of the greatest concern.

On the occasion therefore of the forthcoming marriage of Her Royal Highness Princess Elizabeth, who following Your Majesty's devoted example of service to the community has enshrined herself in the affections of the Scottish people, we beg leave humbly to associate ourselves with the rejoicing of all loyal subjects in this land and Empire, and to tender to Your Majesty and to Her Majesty the Queen our heartfelt congratulations.

We pray that the blessing of Almighty God may rest upon Her Royal

Highness and her future husband always, and that happier and more prosperous times than our land enjoys to-day may be in store for them in the future.

Signed in the name and by the authority of the Society of Antiquaries of Scotland, in general meeting assembled, and sealed with the common seal of the Incorporation this Fifth day of November in the year of Our Lord One thousand nine hundred and forty-seven.

HADDINGTON, *President*,

J. M. DAVIDSON, *Vice-President*,

A. GRAHAM, *Secretary*.

The Council's Report was unanimously approved on the motion of the President, seconded by Mr J. M. Davidson.

Dr William Angus proposed the name of Alan Orr Anderson, M.A., LL.D., for election as an Honorary Fellow of the Society. Dr Anderson had distinguished himself in the field of historical research by his works on *Early Sources of Scottish History* and (in collaboration with Dr W. C. Dickinson) a facsimile edition of the *Chronicle of Melrose*. He had also taken an interest in the Celtic hill-forts of Central Perthshire, especially in Glen Lyon. His activities had been carried on under severe physical disability. He was worthy of the distinction now proposed to be conferred upon him. Mr R. B. K. Stevenson proposed the name of Dr A. E. Van Giffen, Director of the Biological-Archaeological Institute in the University of Groningen, Holland. In his exploration of the sandy burial-mounds of the Bronze Age he had rescued the impressions of timber palisades, as well as of the skeletons, by a highly refined technique. These two names being submitted to the meeting there was a unanimous vote for their election as Honorary Fellows.

Proposals for the alterations in the Society's Laws 1, 9, and 15 having been already circulated to Fellows, were unanimously approved on the motion of the President, with the addition in Law 9 of the words "if available" after the word "*Proceedings*," and in Law 15 of the words "*ex officio*" after the word "Museum."

At the invitation of the Chair, Mr James J. Lamb, Treasurer, called attention to the Financial Statement now in the hands of Fellows, which covered a period of two years, and which showed that the funds of the Society were in a healthy state. He took the opportunity of mentioning that the appeal for taking up Deeds of Covenant had already been well responded to, 71 Fellows having signed, so that the Society would already benefit to the extent of about £60 per annum. The adoption of the Financial Report was moved by Miss Anne S. Robertson and cordially agreed to. The proceedings terminated with a vote of thanks to the Treasurer.

MEETINGS OF THE SOCIETY.

*Monday, 9th December 1946, Mr J. M. DAVIDSON, O.B.E., F.C.I.S., F.S.A.,
Senior Vice-President, in the Chair.*

A Ballot having been taken, the following were elected Fellows: Anthony Charles Bannan; James D. Boyd, D.A.(Glas.); Alexander J. Lothian; James Fairweather Milne, M.A., M.B., Ch.B.; Edward Francis Sykes; Eric G. Turner, M.A.; William V. Wade, M.A., F.S.A.

The following Communications were read:—

I. King James IV of Scotland: His Influence on Medicine and Science, by DOUGLAS GUTHRIE, M.D., F.R.C.S., F.S.A.Scot.

II. Bronze Age Cist at Pinnacle Hill, Kelso, by CHARLES S. T. CALDER, A.R.I.A.S., F.S.A.Scot.

*Monday, 13th January 1947, Mr J. M. DAVIDSON, O.B.E., F.C.I.S., F.S.A.,
Senior Vice-President, in the Chair.*

A Ballot having been taken, the following were elected Fellows: Chalmers Burns, M.A., Mus.B.; James A. G. Hastings; F. Russell Perkins; William Scott Robson; Miss Marion G. Stirling.

The following Communications were read:—

I. Excavation of a "Wag" at Forse, Latheron, Caithness, by ALEXANDER O. CURLE, C.V.O., LL.D., F.S.A., F.S.A.Scot.

II. Birthbrief of Walter Innes, by Sir THOMAS INNES of Learney, K.C.V.O., Lord Lyon King of Arms, F.S.A.Scot. (*Read by title.*)

III. Excavations at Scotstarvit, Cupar, Fife, by Professor GERHARD BERSU, F.S.A., F.S.A.Scot.

*Monday, 10th February 1947, The Right Hon. THE EARL OF HADDINGTON, M.C.,
T.D., President, in the Chair.*

A Ballot having been taken, the following were elected Fellows: Douglas Alex. Allan, D.Sc., Ph.D.; John Campbell; Captain William D. Cheyne-Macpherson of Dalchully; Miss Muriel M. O. Douglas, M.A.; William J. Macaulay, D.A.; James Stewart of Keil; Keningale Bertram Wright, B.Sc., A.M.Inst.C.E.

A Ministry of Information film entitled "The Beginnings of History" was exhibited in the Library. Professor Piggott gave a short introduction.

Monday, 10th March 1947, Mr WILLIAM ANGUS, LL.D., in the Chair.

A Ballot having been taken, the following were elected Fellows: James Anderson; Rev. John Anderson, B.D.; Alexander W. M. Battersby, L.R.C.S. & P.Ed., D.P.H.; W. G. Rowntree Bodie, A.R.I.B.A.; Ranald W. M. Clouston, B.Sc.Eng.; James A. Finlayson, D.A.; James J. Lamb, M.A., LL.B.; Donald G. Moir; Miss Helen M. Roe, M.A.; Maurice E. Taylor, A.R.I.B.A., M.T.P.I., F.R.I.A.S.

The following Communications were read:—

I. A Stone Age Settlement at the Braes of Rinyo, Rousay, Orkney (Second Report), by Professor V. G. CHILDE, D.Litt., D.Sc., F.B.A., F.S.A., F.S.A.Scot., and WALTER G. GRANT of Trumland, F.S.A.Scot.

II. Excavations in Two Homesteads at Crook Cleuch, Roxburghshire, by KENNETH A. STEER, M.A., Ph.D., F.S.A.Scot.

Monday, 14th April 1947, Mr ALEXANDER O. CURLE, C.V.O., LL.D., F.S.A., Vice-President, in the Chair.

A Ballot having been taken, the following were elected Fellows: Douglas Hamilton; Archibald Dougal MacKinnon, M.A.

The following Communications were read:—

I. Antiquities in Easter Ross and Sutherland, by J. M. DAVIDSON, O.B.E., F.C.I.S., F.S.A., F.S.A.Scot.

II. Farms and Fortifications in King's Park, Edinburgh, by ROBERT B. K. STEVENSON, M.A., F.S.A.Scot.

Monday, 12th May 1947, The Right Hon. THE EARL OF HADDINGTON, M.C., T.D., President, in the Chair.

A Ballot having been taken, the following were elected Fellows: George Applebey; G. S. P. Cooke; Captain W. G. Don of Maulesden; Miss S. Dove-Wilson; Robert Gilchrist, A.M.I.C.E.; Marcus K. Milne; W. C. G. Peterkin, W.S.; Rev. David Ramsay; John B. C. Robertson.

The following Communications were read:—

I. Some Observations on the Brochs, by ANGUS GRAHAM, M.A., F.S.A., F.S.A.Scot.

II. Moulds for Bronze Razors, by Mrs C. M. PIGGOTT, F.S.A., F.S.A.Scot.

III. Symbol Stone at Gleneagles, Perthshire, by C. S. T. CALDER, A.R.I.A.S., F.S.A.Scot.

INDEX

	PAGE		PAGE
Aberdalgie, Perthshire, Tomb Slab at, . . .	99	Bronze Age Cists at Pinnacle Hill, Kelso, . .	7-15
Aberdeen, Birthbrief issued by magistrates of, . . .	114-118	— Boar's Head, . . .	204
— University of, donation by, . . .	198	Brooch, Bronze, found at Crock Cleuch, Roxburghshire, . . .	154, 155, 156
— — Library, donation by, . . .	197	Brown, D. A. H., donation by, . . .	196
Abernethy, Perthshire, Short Cist at, . . .	185	Bruce, P. J., donation by, . . .	193
Agnew, James Percival, elected, . . .	202	Buccleuch, Duke of, donation by, . . .	190
Anderson, Dr Alan Orr, elected an honorary Fellow, . . .	206	Buist, Major D. S., elected, . . .	202
Anton, James F., donation by, . . .	190	Bute, The Marquess of, death of, . . .	202
Anvil Stones at Rinyo, Orkney, . . .	39	Cairns, Burial, of Late Bronze Age, at Musselburgh, . . .	174-178
Armour, Rev. Alfred J., elected, . . .	202	Calder, Charles S. T., on Standing Stones on Peterhead Farm, Glencables, . . .	1-7
Arrow-heads, top-sided, distribution of, . .	179-182	— — on Bronze Age Cists at Pinnacle Hill, Kelso, . . .	7-15
Bagge, Axel, donation by, . . .	198	Campbeltown, Spearhead Mould from, . .	171, 172
Baird, Sir William M., death of, . . .	202	Chalmers-Jervise Prize, . . .	205
Balls, of camptonite, . . .	30	Charcoal, . . .	42
— of clay, . . .	42	Childe, Professor V. Gordon, on a Stone Age Settlement at Rinyo, Orkney, . .	16-42
Bauff Town Council, loan of Bronze Boar's Head by, . . .	204	— — donation by, . . .	197
Banner, the Haughhead or "Bluidy," . . .	134-138	Chrisp, Mrs M. N., donation by, . . .	195
Bannerman, Mrs A. B. B., donation by, . .	199	Clack Mills, . . .	44
Barron, Rev. D. G., death of, . . .	202	Clarke, John, elected, . . .	202
Begg, Charles, donation by, . . .	189	Collie, George F., elected, . . .	202
Bell, Miss Elizabeth Turner, death of, . .	202	Colville, Mr Duncan, donation by, . . .	198
Blackburn Mill, Berwickshire, iron objects at, . . .	184	Comb symbol, the, . . .	2-6
"Bluidy" Banner, the, . . .	134-138	Communion Tokens: see Tokens.	
Boar's Head, Bronze, . . .	204	Cook, Mrs M., donation by, . . .	196
Bone Tools at Rinyo, Orkney, . . .	41, 42	Cooper, J. J., donation by, . . .	196
Bo'ness, Cist Burial at, . . .	182	Cotterill, Frank, donation by, . . .	198
Bonhill, Dunbartenshire, Cist found at, . .	178	Covenant, Deeds of, adopted by Society, . .	206
Bothwell Brig, the "Bluidy" Banner at, . .	134	Covenanting Banners, . . .	184
Brelaford, J., donation by, . . .	190	Crock Cleuch, Roxburghshire, excavation of homesteads at, . . .	138-157
Bristol University (Speleological Society), donation by, . . .	198	Cross, A. Robertson, donation by, . . .	195
British Museum, Trustees of, donation by, .	198	Culbin Sands, Morayshire, Arrow-heads from, . . .	181-182
Brochs, Some Observations on the, by A. Graham, . . .	48-99	Cumming, Alexander D., death of, . . .	202
— number and distribution, . . .	49-54	Curle, Dr A. O., donation by, . . .	195
— architectural features, . . .	54-77	Cuthbertson, William F., death of, . . .	202
— galleries in, . . .	57-65		
— wells, . . .	76, 77		
— hearths, . . .	77		
— shape and dimensions, . . .	77-87	Davidson, Major A. R., death of, . . .	202
— external defences, . . .	87-90	— James, M.B., Ch.B., donation by, . .	199
— list of, in Scotland, . . .	91-99	Deeds of Covenant, adopted by Society, . .	206
		Dinwoodie, John, death of, . . .	202

	PAGE		PAGE
Drumclog, The "Bluddy" Banner at,	134	Gunning Fellowship,	205
Drummond, H. J. H., donation by,	195	Guthrie, George S., donation by,	198
Duddingston, "Terraces" at,	159-162	Haddington, The Earl of, donation by,	198
Dumfries Museum, Painted Panel preserved by,	204	Hall, Henry, the "Covenanter," and his descendants,	134-138
Dunsapie, terraces, dyke, and fort,	159-160	Hamilton, Mrs M. A., donation by,	195
Durand, Miss Catherine, elected,	202	Harrison, Miss Dorothea L., donation by,	195
Edinburgh, Farms and Fortifications in King's Park,	158-170	— James, death of,	202
— University (Geological Department), donation by,	190	Haughhead Banner, the,	134-138
Elizabeth, Princess, marriage of, loyal address to the King,	205, 206	Hebrides, Outer and Inner, list of brochs in,	97-98
Episcopal Communion Tokens,	118-133	Henderson, Miss Helen G., donation by,	194
Excavations, report on,	204, 205	Hill, Dr W. C. Osman, report on remains in Bronze Age Cists,	12-15
Falla Cairn, Roxburghshire, relics from,	183	Himsworth, Joseph B., elected,	202
Farne Island, St Cuthbert's hermitage on,	156	Homesteads, excavation of, at Crock Cleuch, Roxburghshire,	138-157
Faroe Islands, horizontal water-mills in,	43	Hood, Miss Violet M., death of,	202
Fellows elected,	202, 207, 208	Hulme, E. Wyndham, donation by,	198
— deceased,	202	Hunter, John, death of,	202
— honorary, election of,	206	Hut Circles in King's Park, Edinburgh,	170
Ferguson, Mr, of Easter Alemoor, Hawick, donation by,	193	Incised Slabs, Scottish, Notes on,	99-113
Film on "The Beginnings of History" exhibited,	207	Innes of Balnacraig, family of,	114
Fingland, S. G., donation by,	180	— of Drainie, family of,	114
Fleming, A., donation by,	194	— Sir Thomas, of Learney, Note on Birthbrief of Walter Innes,	114-118
Forbs, vitrified,	182	— Walter, Birthbrief of,	114-118
Fortuna, J. R., donation by,	189	Johnson, J. Bolato, resigns Treasurership,	204
Fulton, James D. S., elected,	202	Johnston, Alfred W., death of,	202
Geological Department, University of Edinburgh, donation by,	190	— William, elected,	202
Giffen, Dr A. E. Van, elected an honorary Fellow,	206	Jones, W. J., donation of,	194
— — donation by,	198	Keensy, G. S., on Excavation of Homesteads at Crock Cleuch, Roxburghshire,	138
Gillett, H. M., donation by,	198	Keiller, James, elected,	202
Glass, Roman, found at Crock Cleuch, Roxburghshire,	152, 156	Kebo, Bronze Age Cists near,	7
Glensagles, Symbol Stones near,	1	Kerr, Miss Eileen M., donation by,	195
Good, Robert James, death of,	202	— Miss Elsie J., donation by,	195
Goose symbol,	2	— Robert, on Scottish Episcopal Communion Tokens,	118-133
Gordon, E. Hamilton, donation by,	194	Killellan, arrow-heads from,	179, 180
Govan, Miss G. I. C., donation by,	191	King, Address to the, on occasion of marriage of Princess Elizabeth,	205, 206
Gow, Miss Verona, donation by,	190	King's Park, Edinburgh: see Edinburgh.	
Graeme, P. Sutherland, donation by,	191	Kintyre Antiquarian Society, donation by,	198
Graham, A., on Some Observations on the Brochs,	48-50	Knight, Mrs Agnes, donation by,	196
Grant, Walter G., of Tranland, on a Stone Age Settlement at Rinyo, Orkney,	16	Knives, Skail,	32, 34, 39
— — death of,	202	Laenille, A. D., donation by,	180
— — donations by,	190, 191, 203	Lamb, James J., appointed Treasurer of the Society,	204
Greenhill, Frank A., Notes on Scottish Incised Slabs (III),	99-113	Laws of Society, alteration in,	206
Grieve, W. G., death of,	202	Liberton, inscribed Window Panel,	174
		Library, report on,	204

INDEX

211

	PAGE		PAGE
Library, donations and purchases for,	197-201	Peterhead Farm, Perthshire, Symbol Stones	
Lincluden College, Choir Stalls of,	204	at,	1
Livingstone, Rev. D. McNeill, death of,	202	Pictish Symbols: see Symbol Stones.	
Lyon, William K., death of,	202	Piggott, Mrs C. M., donation by,	198
MacCallum, Mrs Maryann, donation by,	196	Pikington, Alan D., donation by,	193
MacColl, Albert Edward, elected,	202	Pinnacle Hill, Kelso, Bronze Age Cists at,	7-15
— H. G., death of,	202	Pollen analyses,	42
McCormick, John, death of,	202	Pottery, at Rinyo, Orkney,	34-39
McDowall, J. Kevan, donation by,	198	— found at Crock Cleuch, Roxburghshire,	
MacGillivray, C. M., of MacGillivray, death		151, 152, 156	
of,	202	Querns, found at Crock Cleuch, Roxburgh-	
Macgregor, Sir Malcolm, of Macgregor, per-		shire,	144, 146, 154, 156
mission by,	197	Quig, Rev. Gordon, death of,	202
MacKeith, A., donation by,	190	Quine, Sylvester L., elected,	202
McLaren, Thomas, death of,	202	Razors, Bronze Age, distribution of,	172
Mace-head, at Rinyo, Orkney,	41	— one from Orkney described,	173
Mauder, Gerald P., donation by,	194	Readman, H., donation by,	189
Meetings of the Society, list of,	207, 208	Rectangular Symbols,	3-7
Melke, Rev. James, death of,	202	Rennie, Miss D., donation by,	195
Mein, Miss E. M., on the Haughhead		Rhind Lectureship, report on,	205
Banner,	134-138	Richardson, Dr James S., donations by,	
Methuen & Co., Messrs, donation by,	197	189, 190, 203	
Mill-rind, on tomb slab,	113	Rinyo, Orkney, account of Stone Age Settle-	
Mills, Water: Horizontal and Clack,	43-47	ment at,	16-42
Milne, George, death of,	202	Rio, Don Hermillo Alcalde del, death of,	202
Ministry of Works, H.M., donation by,	197	Robertson, Mrs G. B., donation by,	195
Mirror-case symbols,	3-5	Robson, W. S., donation by,	198
Moar, Peter, donation by,	193	Rouay, Orkney, Stone Age Settlement in, 16-42	
Moulds, for spearhead,	171, 172	Roxburghshire, Homesteads excavated, 138-157	
Mullins, Miss C. M., donation by,	189	— Falla Cairn,	183
Murray, R., donation by,	195	Russell, Sir David, LL.D., donation by,	198
Museum, report on,	203	St Andrews, University of, Cast made by	
— donations to and purchases for,	189-197	permission of,	196
Musselburgh, Bronze Age Burial Cairns, 174-178		St Cuthbert's hermitage on Farne Island,	156
— Town Council, donation by,	191	Scobie, Major I. H. Mackay, death of,	202
Napier, Duncan S., donation by,	195	Scotland, list of brochs in,	94-99
— J. G., death of,	202	Scrymgeour-Wedderburn, Captain H. J.,	
Newfoundland, evidences of Vikings in, 186-188		donation by,	190
Nuts, Hazel, in interments,	184	Shetland, list of brochs in,	91, 92
Oliphant (Olifaunt), Sir William, Tomb Slab		— Water-mills in,	43, 44
of,	99, 100	Skye, list of brochs in,	97, 98
— identity of,	104-110	Snails, Cellar,	11 n.
— of Dupplin, Sir William,	104	Spearhead Mould, from Campbelltown, 171, 172	
Oliver, Mrs F. S., donation by,	191	Spæological Society, Bristol, donation by, 198	
Orkney, Stone Age Settlement at Rinyo,	16-42	Staig, Robert A., elected,	202
— List of brochs in,	93, 94	Steer, Kenneth A., account of Excavation of	
— Bronze Age razor,	173	Homesteads at Crock Cleuch, Rox-	
Panel, Stone, Inscribed,	174	burghshire,	138-157
Perthshire, Tomb Slabs,	110-113	Stevenson, Robert R. K., on Farms and	
Perth County Council, donation by,	190	Fortifications in King's Park, Edin-	
Perthshire, Symbol Stones near Glencagles, 1		burgh,	158-170
— Abernethy, Cist at,	185	— donation by,	198
— Inlaid Slabs,	99	Stewart, Charles, death of,	202
		Stirling, Col. Archibald, of Garden, death of, 202	

	PAGE		PAGE
Stirling Castle, Constables of, . . .	104-109	Treasurership, resignation of Mr J. Bolam Johnson, C.A., and appointment of Mr James J. Lamb, . . .	204
Stobo, Peeblesshire, Tomb Slabs at, .	110-113	Tullis, Major James K., death of, . . .	202
Stockholm, Kungl. Vitterhets Akademien in, donation by, . . .	198	Turner, William, elected, . . .	202
Stone Age Settlement at Rinyo, Orkney, .	16-42		
Stone Implements, at Rinyo, Orkney, .	39-41		
— at Crook Cleuch, Roxburghshire, . . .	154, 156	Urns, in Bronze Age Burial Cairns at Musselburgh, . . .	174-178
Stuart, Capt. F. Maxwell, loan of choir stalls by, . . .	204	Van Olfen: see Giffen.	
Sulley, P., donation by, . . .	190	Vessy, Robert, Vicar of Stobo, Tomb Slab of, . . .	113
Sutherland, John, donation by, . . .	191	Vikings, evidences of, in Newfoundland, .	180-188
Sweno's Stone, Forres, . . .	72 n.	Vinland: see Wineland.	
Symbols, comb, . . .	2-6	Vitrified Forts, . . .	182
— goose, . . .	2	Votadini, Tribe of, . . .	156, 157
— mirror-case, . . .	3-5		
— rectangular, . . .	3-7		
		Warden, I. G. H., donation by, . . .	193
Tait, James, donation by, . . .	196	Water Mills, horizontal, at Dounby, Orkney, and elsewhere, . . .	43-47
Taylor, Charles, death of, . . .	202	Watson, Charles B. Boog, death of, . . .	202
"Terraces" at Duddingston, . . .	150-162	Watt, V. G. Buchan, elected, . . .	202
Thomas, Homer L., elected, . . .	202	Wineland, Viking settlement in, . . .	186
Thomason, Thomas, donation by, . . .	193	Works, Ministry of, donation by, . . .	197
Thoms, Patrick Watt, elected, . . .	202		
Tokens, Communion, of Scottish Episcopal Church, . . .	118-133	Zahn, Professor Dr Robert, death of, . . .	202
Tomb Slabs, Incised, . . .	99-113		

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